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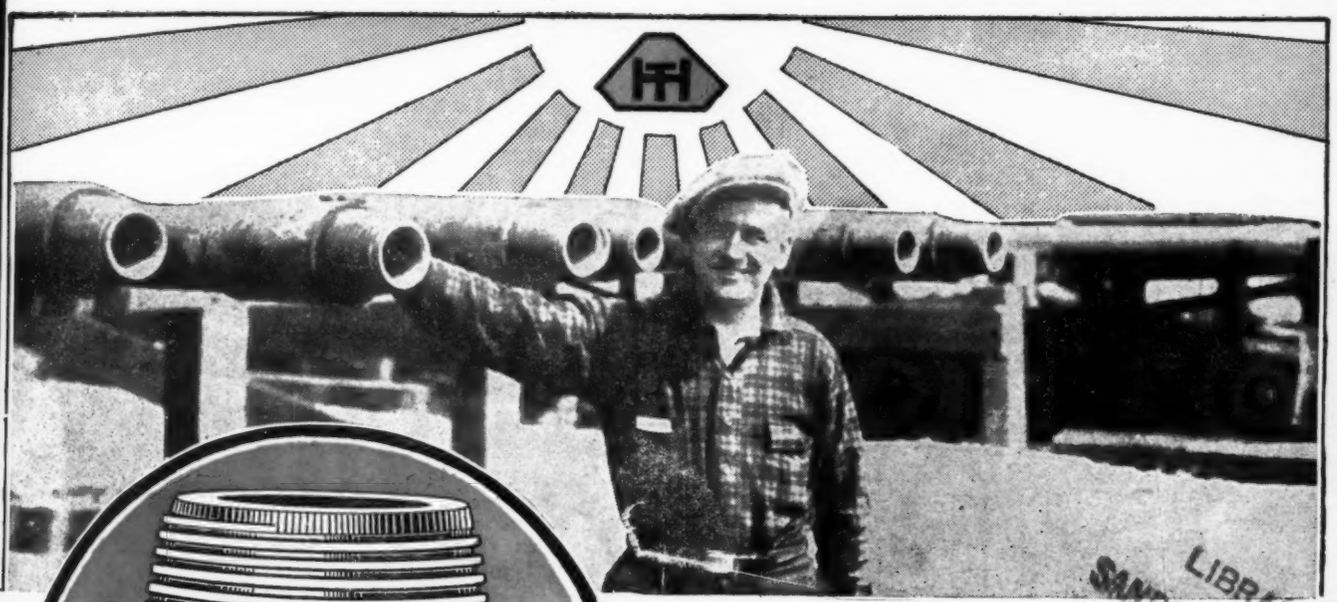
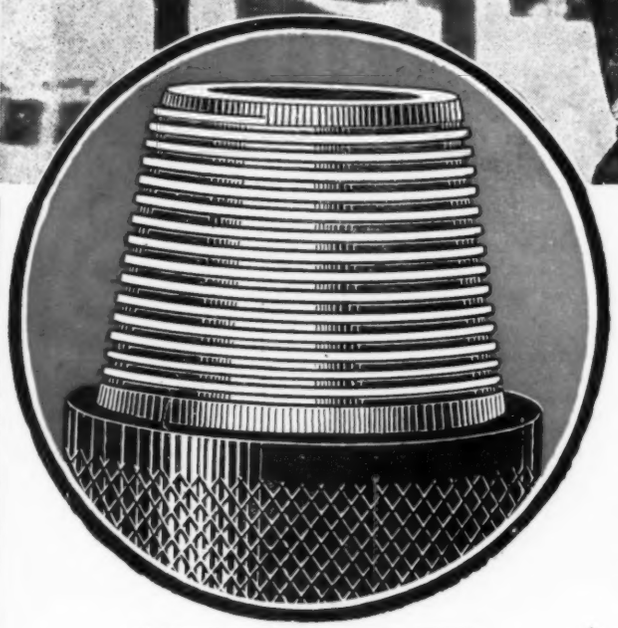
The OIL WEEKLY

June 10, 1927 Volume 45. No. 12





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After being thoroughly annealed every

HUGHES

TOOL JOINT FORGING

is machined all over to finished dimensions—great care being exercised to preserve alignment and concentricity of threads with respect to the body of the joint.

NO. 3 OF A SERIES

At Your Supply Store

HUGHES TOOL COMPANY

Service Plants:
Los Angeles, Calif.
Oklahoma City, Oklahoma

Main Office and Plant:
HOUSTON, TEXAS

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New York City

ACME
DRILLING & FISHING TOOLS

The B. & R. Wire Line Drilling Clamp

"The simplest clamp with the greatest gripping power"

ACME
Fish Tail Bits

ACME
Drilling Bit

Known the World Over for Unexcelled Service

The unusual is the customary thing in Acme tools. They are built by practical oil men. The vision of practical drillers and fishermen of long and varied experience is translated into designs and superior materials, and into unusual attention to the entire construction and each tool, in the actual knowledge of the service it must perform . . . . Their outstanding features represent extra care in manufacture. Superficial examination very often does not reveal these refinements. They do not show up until the tool is placed in service. . . . . For instance, the use of special steels for certain Acme tools costs twice as much as it would to make them of ordinary steel. This minute attention to details in relation to each tool's future service raises Acme high above the ordinary level of oil country tools—into a distinguished class that reaches the peak of *Quality, Service* and *Value*. Acme users have learned that Acme Tools give Acme (*the highest possible*) results in all three respects.

The Acme Catalogue will be sent upon request.

ACME
Drill Mill

ACME
Casing Kicker in Tripped Position

ACME FISHING TOOL CO.
Parkersburg, West Virginia.

Export Office: 136 Liberty St., New York City, N.Y.

Warehouses and Distributors:

Midland Iron Works—Billings, Montana.
Great Northern Tool & Supply Co.—Kevin, Mont.
Acme Rental Tool Service Co.—Graham, Texas.
Acme Tool Company—Albany, Texas.
Acme Fishing Tool Co. of Tex.—Whittenburg, Tex.
Acme Fishing Tool Co. of Tex.—Roxana, Tex.
Acme Tool Company—Cross Plains, Texas.
Acme Tool Company—McCamey, Texas.
Acme Tool Company—Brownwood, Texas.
Great Northern Tool & Supply Co., Kemmerer, Wyo.
B. & A. Specialty Company—Tulsa, Okla.
Acme Fishing Tool Co.—Okmulgee, Okla.
Logan Foundry & Machine Co.—Logan, O.
Lloyd, Smith Company—Bradford, Pa.
Elms Bros. & Company—Waynesburg, Pa.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879

SAND... INTER
JUN 14 1927
REF'D TO
ANS'D

ENDURANCE

The newspapers said that Lindbergh undertook his glorious adventure *alone*—but, of course, the newspapers are mistaken.

How can a man be *alone* when the hopes, prayers and well wishes of a hundred million admirers accompany him? How can a man be *alone* when the entire civilized world is with him in spirit—thrilling to his thrills, sharing in his fears, glorying in his triumph?

Driving irresistibly on thru the silent, hungry darkness of an Atlantic night, Lindbergh may have been lonely, but certainly he was not *alone*.

Grit, stamina and endurance are marvelous attributes—in oil industry pumps as well as in aviators!

GASO PUMP & BURNER MFG. CO. *Tulsa, Oklahoma*

. . . . . .

Pumps that Last and Last and Last

Gaso Walking Beam Pump No. 601—450 to 600-lb. pressure. Especially adapted to leases where no pumping power is available. Straight-line pull prolongs life, reduces wear.

Gaso Walking Beam Pump No 604—Designed for gas or vacuum. Connects to the walking beam with either wood or pipe pittman. Will withstand world of abuse.

GASO PUMPS

for every oil industry need

Reading Pipe
"Cheaper in the Long Run"

Birch Oil Company Tries Steel Pipe for a Cooling Tower for 2 months—that's all it lasted

Now They Specify READING

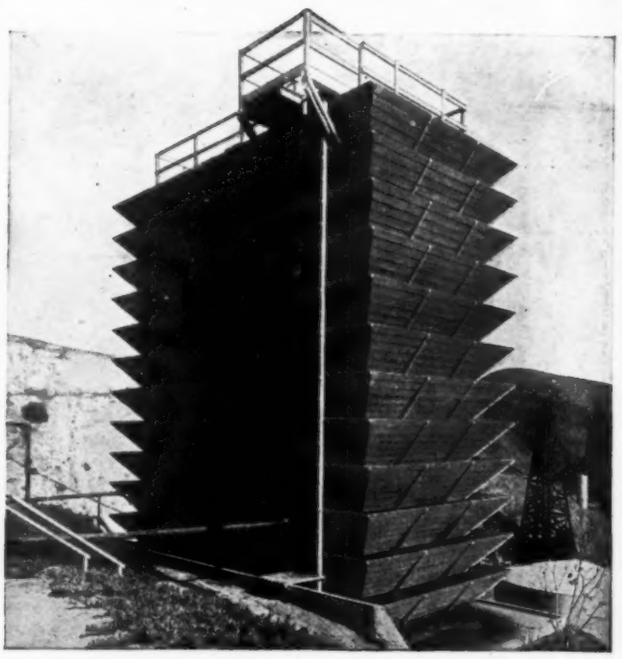
Reading Iron Company,
441 Pacific Mutual Building,
Los Angeles, California.

Gentlemen:

Replying to your inquiry as to the reason for our specifying "Reading Iron Pipe" on our order a short time ago, we beg to advise that this pipe was to be used for cooling coils in our water tower, and our previous experience demonstrated that steel pipe would not withstand certain elements in the water which caused corrosion, whereas, the iron pipe was not affected in the least.

When this cooling tower was built about a year ago, we installed second hand Reading Iron Tubing for coils, and these coils are in just as good condition today as they were when put into operation. About two or three months ago we found it necessary to install additional coils, and as we had no Reading Tubing on hand at the time, we built these of steel tubing which lasted about two months and were replaced with the Reading Iron purchased a short time ago. After about two months service the steel tubing had corroded so bad, that leaks were discovered in many places, and on examination, we found the entire steel installation completely gone.

We also find Reading Iron Tubing an eliminator of trouble in crooked holes where we have had considerable trouble with rod cut tubing. The Iron tubing apparently withstands the abrasive effect caused from continual contact with the rod couplings better than the harder steel tubing.



Cooling Tower on the Property of Birch Oil Company

Although the first cost may be slightly higher, we feel that in many instances the Reading Iron installation will prove cheaper in the long run.

Thanking you for the interest you have shown in our past relationship, and assuring you of our hearty cooperation, we are,

Yours very truly,

BIRCH OIL CO.

J. H. Royer

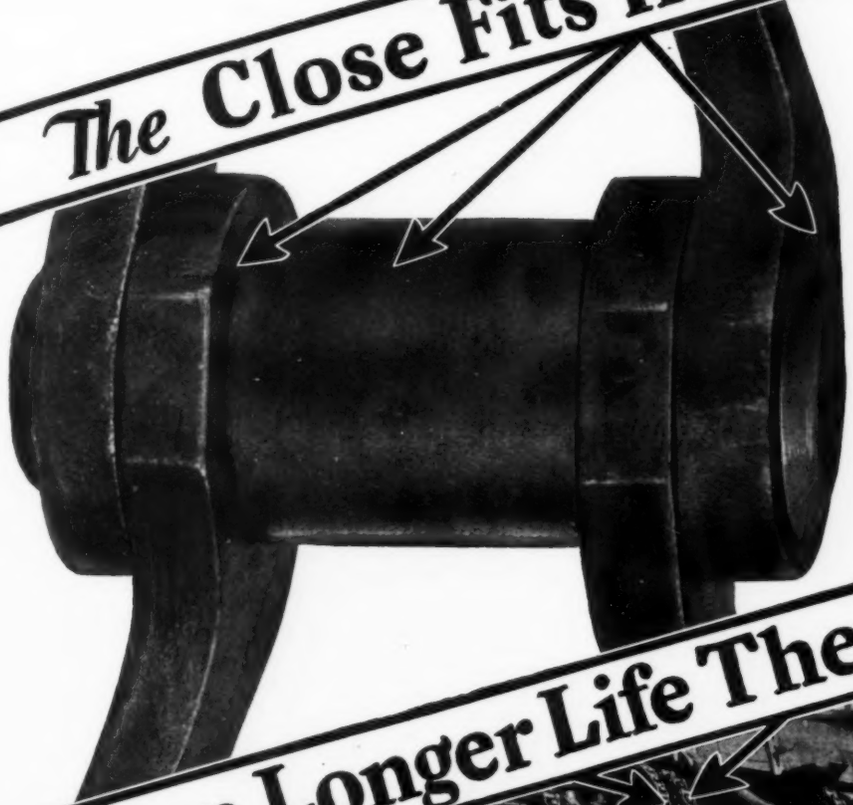
Superintendent

READING PIPE
GENUINE WROUGHT IRON

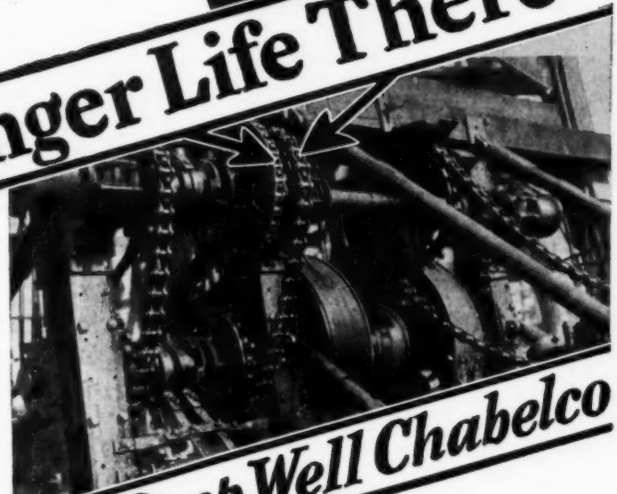
READING IRON COMPANY HOUSTON, TULSA, SHREVEPORT, LOS ANGELES READING, PENNSYLVANIA

Say you saw it in The OIL WEEKLY

The Close Fits Here



Mean Longer Life There



for Deep Well Chabelco

The close fits of Rex Deep-Well Chabelco 1030 D. W. 3 and 1240 D. W. 4—between the ground bushings and side bars and the ground pins and the side bars make every link a unit. The smooth ground pins and bushings are forced into the accurately broached holes by the slow, smooth stroke of pressure recorded machinery. Every link has the proper force fit.

That is why the New Rex DeepWell Chabelco 1030 D.W. 3 and 1240 D. W. 4 last longer on rotary drilling rigs. Large stocks in all active oil fields.

Rex Chabelco 1030 D. W. 3 is an A. P. I. No. 3 chain

Rex Chabelco 1240 D. W. 4 is an A. P. I. No. 4 chain

The tensile strength of 1030 D. W. 3 is 45,000 pounds

The tensile strength of 1240 D. W. 4 is 90,000 pounds

CHAIN BELT COMPANY

739 Park Street • Milwaukee, Wis.

REX

Reg. U. S. Pat. Off.

1000 Keystone Building
Houston, Texas

1414 Santa Fe Avenue
Los Angeles, Calif.

CHABELCO

Say you saw it in The OIL WEEKLY

Regan Tubing Head

Ties tubing securely

Flange principle; two flat surfaces bolted together prevent hanging up on side.

Top Flange can be quickly bolted in place; no troublesome tongue and groove joint.

Hydraulic packing forms absolute seal. Easy to hose off.

Tested for pressure before shipment.

The simple method

Interior is taper-bored to permit inserting of slips.* A big time-saver and safeguard.

*This Head is in tremendous demand in the Rocky Mountain and Mid-Continent fields. We make a special type in which slips can be left in the Head to give added support to the tubing. These slips can be raised or lowered by means of a wire extending through the Top Flange.

Ask for descriptive literature.

Regan
Forge & Engineering Co.
Manufacturers of Oil Well Equipment
San Pedro, California U.S.A.

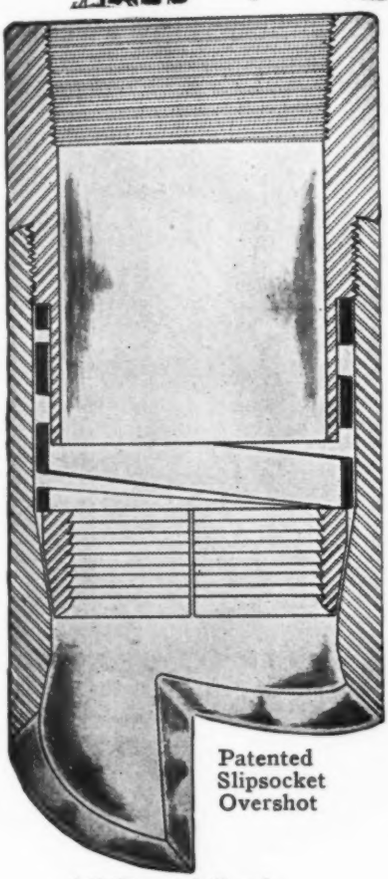
Houston, Texas, 1521 Post Dispatch Bldg.

New York City 75 West St., Wm. Braat, Manager

Oklahoma City, Okla. 531 W. Main St.

Maracaibo, Venezuela Wm. Adams, care Amer. Consul

—takes all the "GUESS" out of your FISHING JOBS!



Patented Slipsocket Overshot

All Forged Steel

LE BUS SLIPSOCKET OVERSHOT

Equipped with slips for fishing for all sizes of plain pipe or tool joints and collars. A SURESHOT overshot.

Write for literature and price list.

LE BUS PATENTED OIL WELL TOOLS

- LEBUS Automatic Cathead
- LEBUS Slipsocket Overshot
- LEBUS Eureka Tongs
- LEBUS Breakdown Post
- LEBUS Bottom Hole Plug
- LEBUS Outside Drill Pipe Cutter
- LEBUS Inside Pipe or Casing Cutter

AT YOUR DEALERS

MANUFACTURED BY THE

LE BUS ROTARY TOOL WORKS

ELECTRA, TEXAS

Export Agents, Acme Well Supply Co., Inc., 136 Liberty Street, New York City, N. Y.

Say you saw it in The OIL WEEKLY

HERE is wire rope that resists unstranding—the ends require no seizing—that is easier to handle, lasts longer and lowers operating and maintenance costs.

Tru-Lay Brand, because of many advantages due to its exclusive preformed construction, is being widely adopted for oil field use.

Installed as sucker rod lines, tubing lines, rotary drilling lines and coarse laid cable tool lines, it will give more dollar for dollar value—and far longer service. Prove this for yourself.

PREFORMED WIRE ROPE
AMERICAN CABLE COMPANY
TRU-LAY

AMERICAN CABLE COMPANY, *Inc.*
105 Hudson Street, New York City
An Associate Company of the American Chain Company, Inc.
District Offices: Chicago, Cleveland, Philadelphia, Pittsburgh, Tulsa
The Dominion Wire Rope Company, *Limited,* Montreal
Sole Canadian Licensed Manufacturers

Sold in field stores by

Jarecki Manufacturing Co. and Branches, Pittsburgh, Pa.
Jarecki Manufacturing Co. and Branches, St. Louis, Mo.
Marion Machine and Foundry Co. and Branches, Marion, Ind.
Grinnell Company of the Pacific and Branches, Los Angeles, Calif.

PREFORMED WIRE ROPE

TRADE TRU-LAY MARK

(REG. U. S. PAT. OFF.)

Say you saw it in The OIL WEEKLY

International Derrick Adopts Timken Bearings

There can be no better proof that Timken Bearings improve oil field equipment and output than the fact that the International Derrick and Equipment Company have standardized on Timkens.

International engineers found in Timken Bearings the sure way to greatest endurance, power-saving and attentionless operation. These results come from eliminating all possible friction, carrying thrust scientifically, and permanently maintaining rigidity and alignment. Every form of wear—load from any direction—is overcome by the *POSITIVELY ALIGNED ROLLS*, tapered construction, and electric steel of Timken Tapered Roller Bearings. They also lend themselves to perfect enclosure in simple, compact housings, which makes for refined, economical design.

All these betterments are now available to users of International equipment with Timken Tapered Roller Bearings in it.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

Say you saw it in The OIL WEEKLY

The MODERN WAY

IS

ELECTRIC POWER

The "Pioneering" has already been done Let us show you what others are saving using

ELECTRICITY

for Drilling ~~
Pumping ~~~
Refining ~~~
Manufacturing

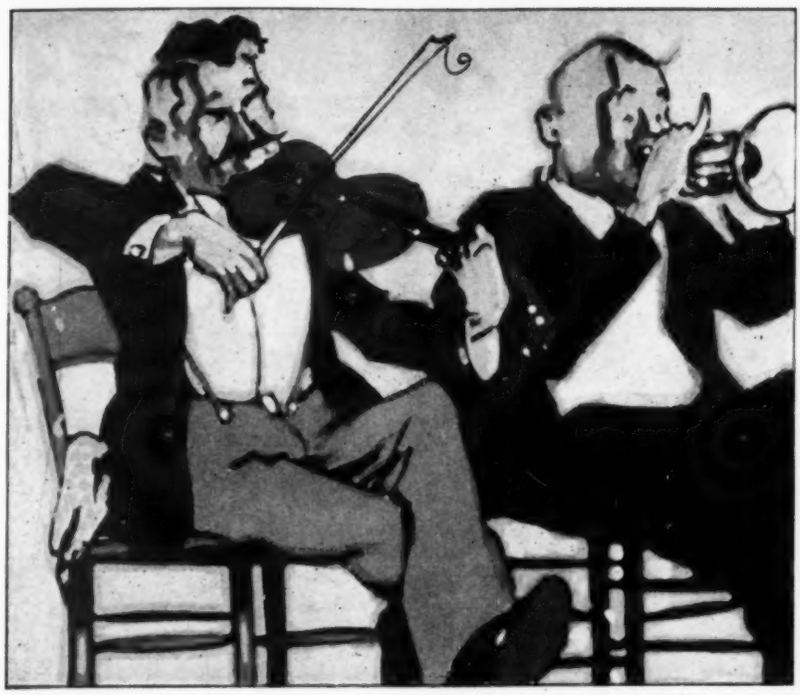
Let Our Engineers Help Solve Your Power Problems

Gulf States Utilities Co. Western Public Service Co.

Texas Division
Beaumont

Louisiana Division
Lake Charles

Say you saw it in The OIL WEEKLY



When "Turkey in the Straw" was the big hit ~

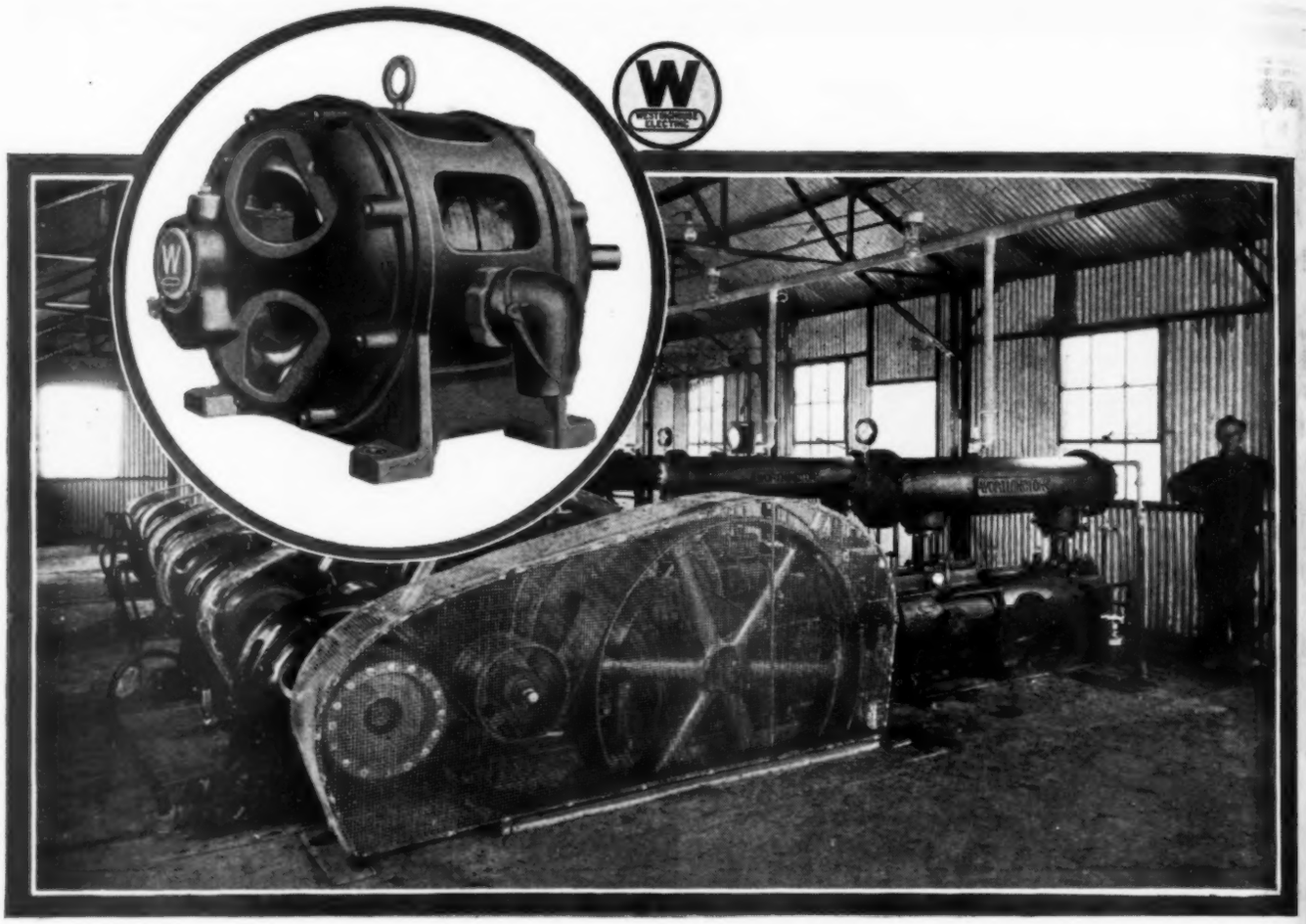
EVEN the saloons closed—it was awful. Just another day of "rest" —it marked the closing of the week and was redolent of soap, bay rum, starch and sometimes a "Saturday Nite" hang over. But times have changed, Sunday's a pretty lively day today, in spots.

Thirty-two years sees many changes —in habits, customs, laws and friends —but Jones Sucker Rods have stood the test of time and usage—today they still are the World's Finest Rods —experience, skil!—and sincerity of purpose all contribute to their lasting quality.

The Jones Forged End Rods—the Giant and Perfect are the world's finest Sucker Rods. Try them!

JONES sucker rods

S.M.JONES COMPANY.
Toledo, ~ Ohio.~



When the Natural Pressure Failed—

WHEN air-gas lifts were found to be the only successful means for stimulating sluggish wells—when motors were wanted and wanted at once, Westinghouse was prepared to meet the emergency.

For instance, in the Seminole field in Oklahoma, operators faced a serious loss in time and production because of the low gas factor. While the use of air-gas lifts was a relatively new method of increasing production, experiments and tests were not necessary to establish the superior reliability of Westinghouse motors for application to compressors.

Furthermore, operators were quick to recognize the many economic advantages of these motors. Sealed-Sleeve bearings, permanent insulation and indestructible rotor—these are inherent features that prolong the life of the motor and make for lower maintenance costs. Repeat orders also express the confidence the oil industry has placed in this equipment.

Westinghouse Electric & Manufacturing Company
East Pittsburgh Pennsylvania
Sales Offices in All Principal Cities of
the United States and Foreign Countries

Westinghouse

X92770

SUPPLY
BOVAIRD
COMPANY

The **SAFE CASING--**
SPIDER *is the spider that many large, and practically all small producers insist must be used in ---running and pulling their Casing ----------*

BOVAIRD

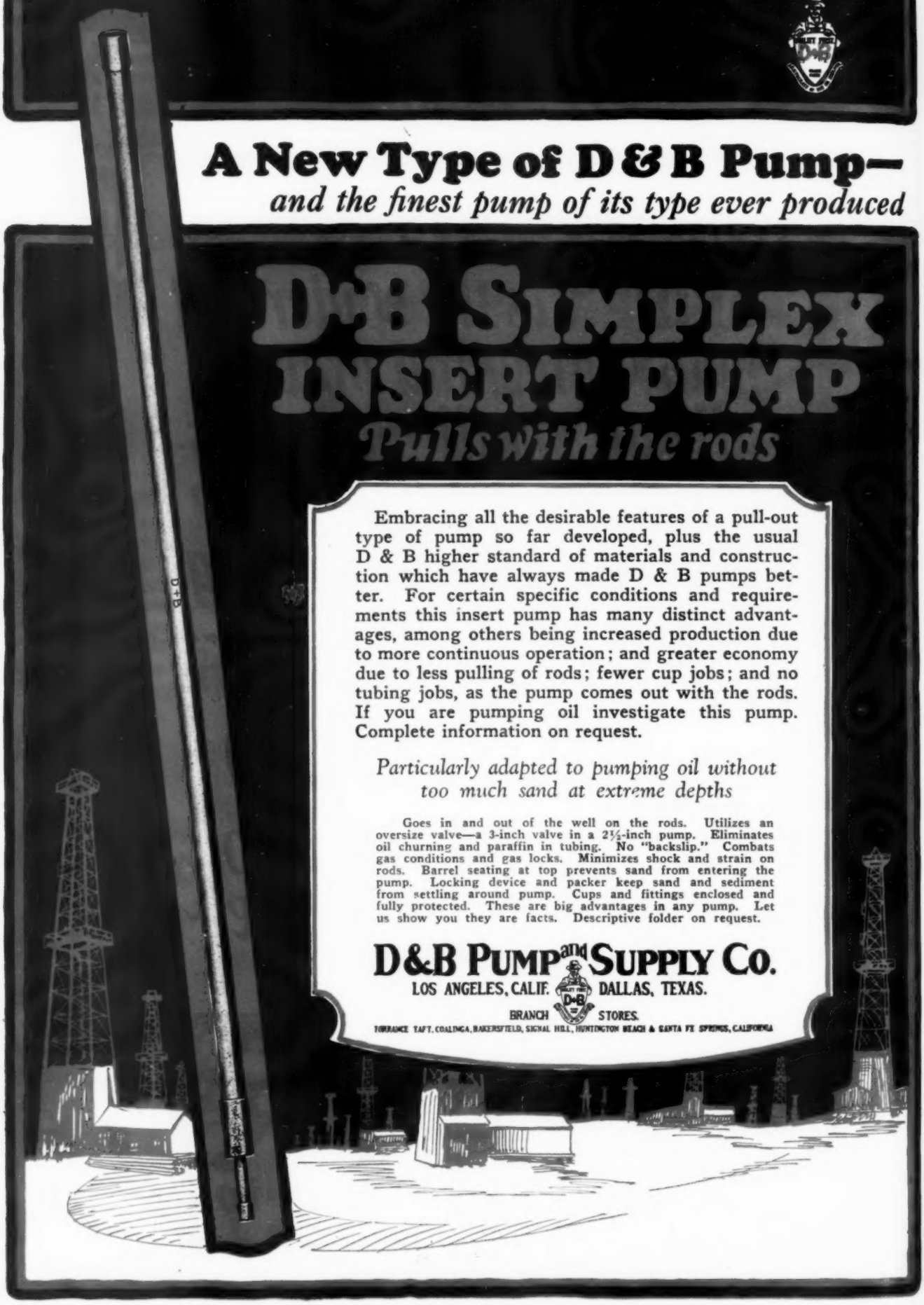
Superior and safe in oil fields the world over

BOVAIRD

"A good name to tie to"

A New Type of D & B Pump—
and the finest pump of its type ever produced

D+B SIMPLEX INSERT PUMP
Pulls with the rods



Embracing all the desirable features of a pull-out type of pump so far developed, plus the usual D & B higher standard of materials and construction which have always made D & B pumps better. For certain specific conditions and requirements this insert pump has many distinct advantages, among others being increased production due to more continuous operation; and greater economy due to less pulling of rods; fewer cup jobs; and no tubing jobs, as the pump comes out with the rods. If you are pumping oil investigate this pump. Complete information on request.

Particularly adapted to pumping oil without too much sand at extreme depths

Goes in and out of the well on the rods. Utilizes an oversize valve—a 3-inch valve in a 2½-inch pump. Eliminates oil churning and paraffin in tubing. No "backslip." Combats gas conditions and gas locks. Minimizes shock and strain on rods. Barrel seating at top prevents sand from entering the pump. Locking device and packer keep sand and sediment from settling around pump. Cups and fittings enclosed and fully protected. These are big advantages in any pump. Let us show you they are facts. Descriptive folder on request.

D&B PUMP and SUPPLY Co.

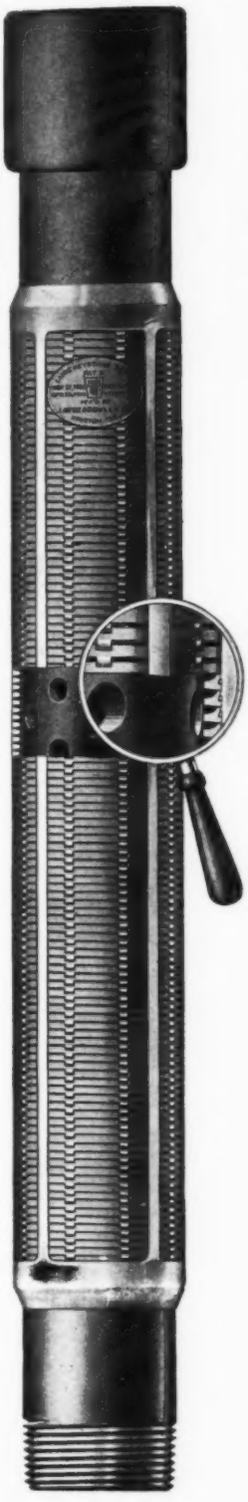
LOS ANGELES, CALIF. DALLAS, TEXAS.

BRANCH STORES.

TORRANCE TAFT, COALINGA, BAKERSFIELD, SIGNAL HILL, HUNTINGTON BEACH & SANTA FE SPRINGS, CALIFORNIA

Say you saw it in The OIL WEEKLY

THE LAYNE



The Need for Economy In the Oil Industry Is Greater Today Than Ever

THE LAYNE

Wire Wrapped Screen Assures Maximum Production

Here Are 3 Reasons Why Layne Screens Are Superior

1. Pipe slightly recessed, wire wrapped in recess and sweated to pipe, forming a solid collar on both ends.
2. Keystone wire, accurately wound on pipe by our patented winding machine.
3. Lugs accurately sized and placed in vertical alignment under heavy side pressure; this insures accurate spacing between the wires and prevents displacement of the wire on the perforated pipe.

Write or Wire Us Your Needs

The Layne & Bowler Co.
HOUSTON, TEXAS.
VICKERS, LIMITED
LONDON, ENGLAND.
THE LAYNE & BOWLER CORP.
LOS ANGELES, CALIF.

New Engine!

GRAHAM BROTHERS TRUCKS

This is the finest engine ever used in Graham Brothers Trucks and Commercial Cars . . . Every advanced engineering feature that is proven.

See this new engine! . . . See it today! . . . Compare it with *any* engine *ever* built into *any* truck!

$670 ¾-TON
$885 1-TON
$1245 1½-TON
$1445 2-TON

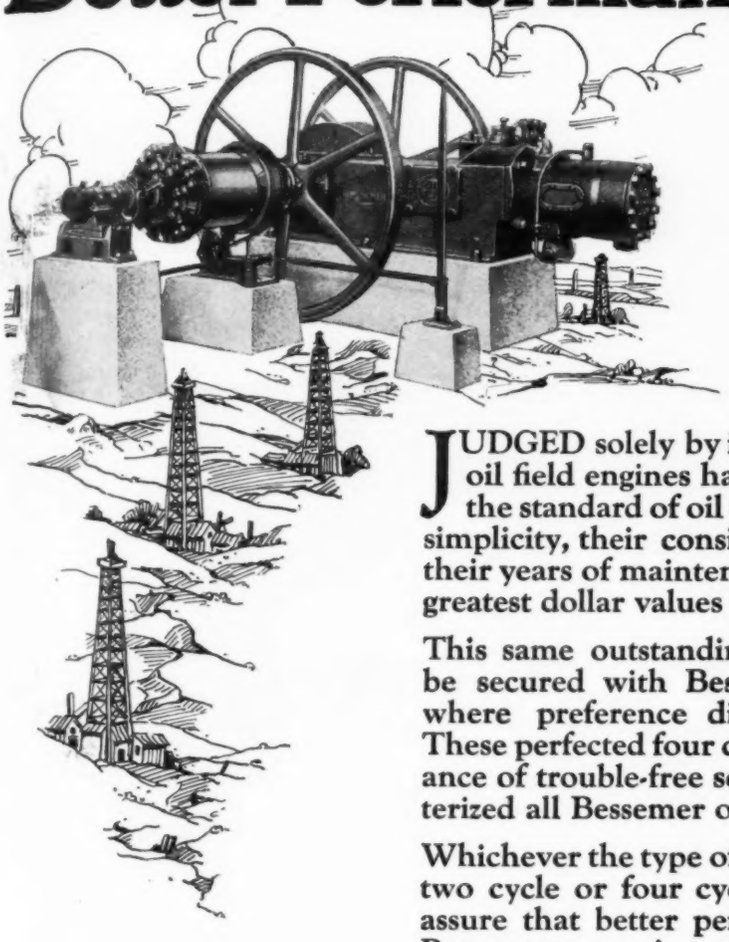
Chassis prices, f. o. b. Detroit

GRAHAM BROTHERS
EVANSVILLE – DETROIT – STOCKTON
A DIVISION OF DODGE BROTHERS, INC.
GRAHAM BROTHERS (CANADA) LIMITED, TORONTO, ONTARIO

MORE POWER—MORE SPEED
FASTER ACCELERATION
MORE ECONOMY—MORE VALUE

Say you saw it in The OIL WEEKLY

Better Performance-Longer Life



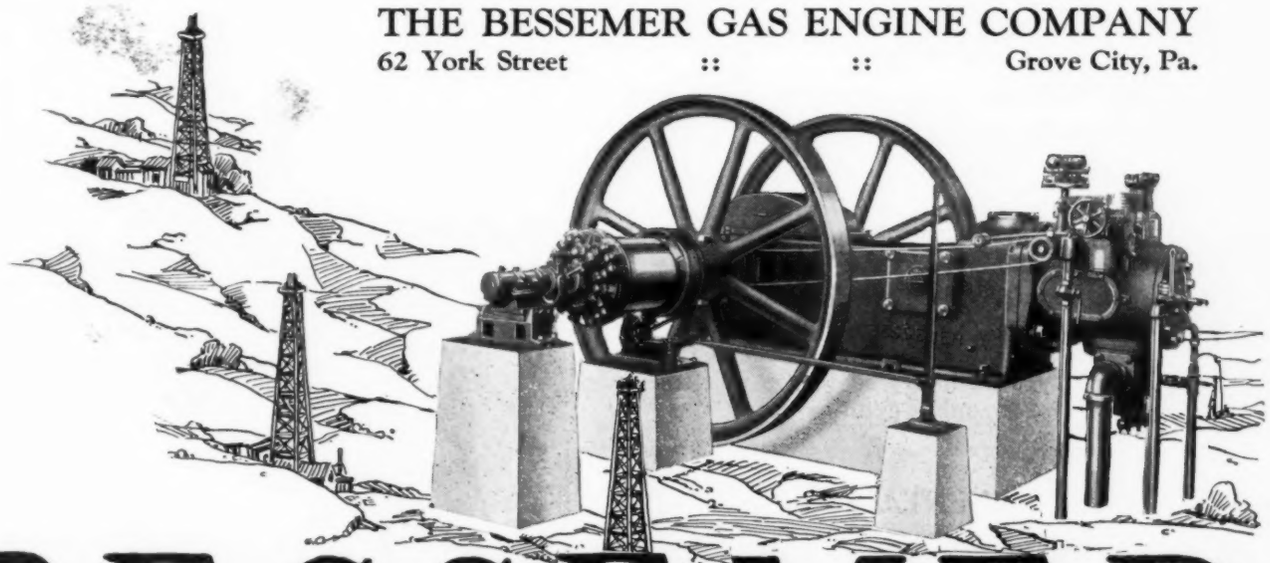
With either 2-cycle or 4-cycle Bessemer Oil Field Engines

JUDGED solely by its performance, Bessemer two cycle oil field engines have become universally recognized as the standard of oil country power plants. Their rugged simplicity, their consistent 99%+ running records, and their years of maintenance free operation mark them the greatest dollar values in oil field engines.

This same outstanding Bessemer performance can also be secured with Bessemer four cycle oil field engines, where preference dictates a four cycle power plant. These perfected four cycle Bessemers have the same assurance of trouble-free serviceability that has always characterized all Bessemer oil field power equipment.

Whichever the type of oil field engine you prefer, whether two cycle or four cycle, you can get it Bessemer built to assure that better performance and longer life that only Bessemers can give you.

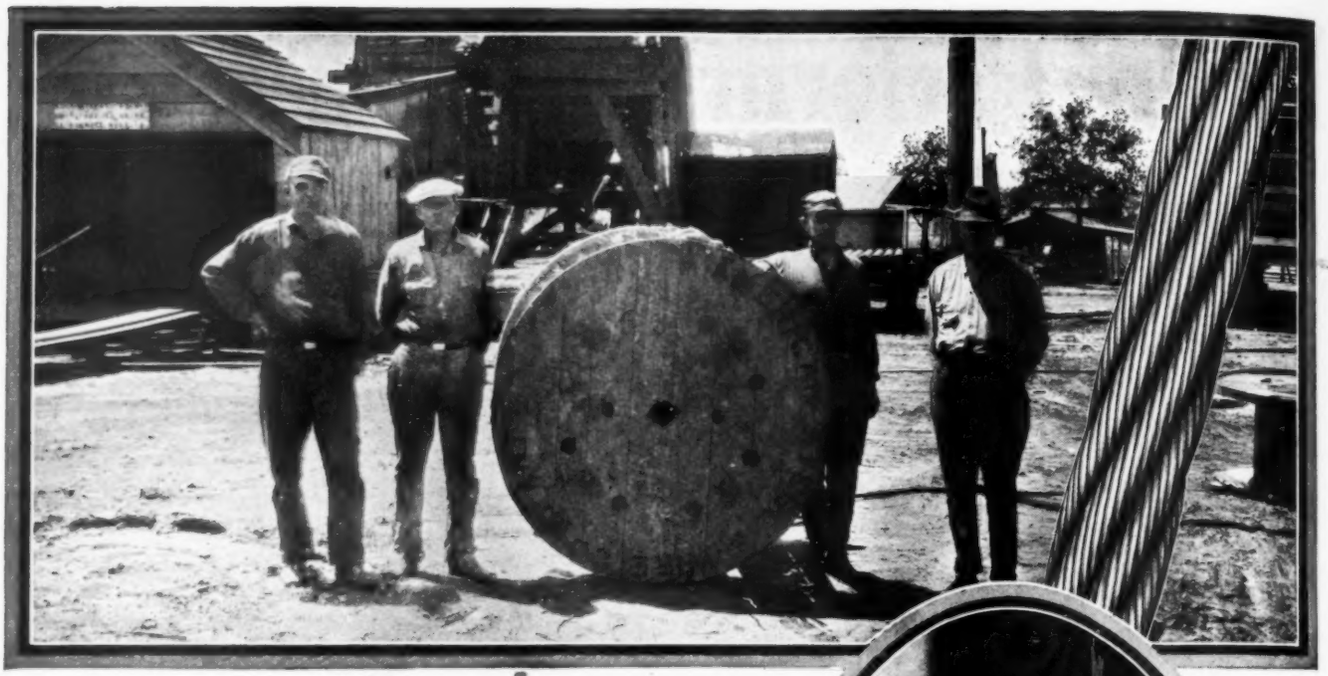
THE BESSEMER GAS ENGINE COMPANY
62 York Street :: :: Grove City, Pa.



BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Say you saw it in The OIL WEEKLY



Wewoka's Largest Well

Drilled with American Wire Line

Magnolia's Bagwell No. 4, Wewoka, which came in April 23rd producing 5,500 bbls. though pinched in, was drilled with an American Steel & Wire Company drilling line. Bagwell No. 4 is Wewoka's largest well from the standpoint of initial production of good oil.

Left to right, the drilling crew are: C. K. Shields, Tooldresser; C. H. Lann, Driller; J. W. Masters, Tooldresser; B. P. Walters, Driller.

AMERICAN STEEL & WIRE COMPANY'S Wire Lines lead in the oil fields for one reason only—genuine merit.

"If CONTINENTAL Sells It, There Is No Better"

THE CONTINENTAL SUPPLY CO.,

General Offices: St. Louis

Export Office: 74 Trinity Court, New York City

London Office: 316-317 Dashwood House, Old Broad St., E. C. 2

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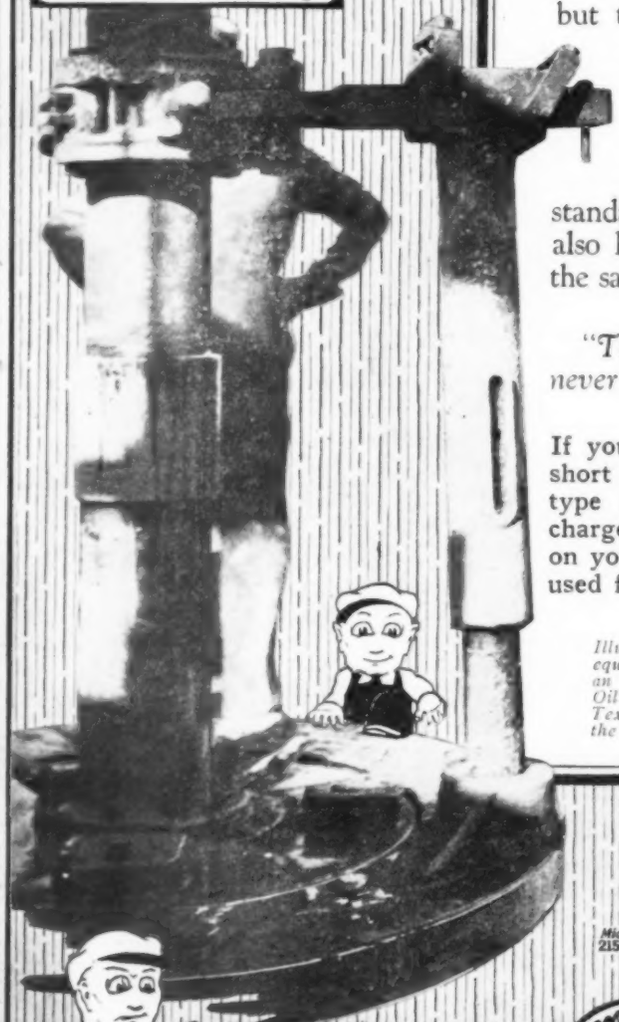

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The OIL WEEKLY

Edited Weekly at Houston, Texas SPENCER W. ROBINSON, *Editor*

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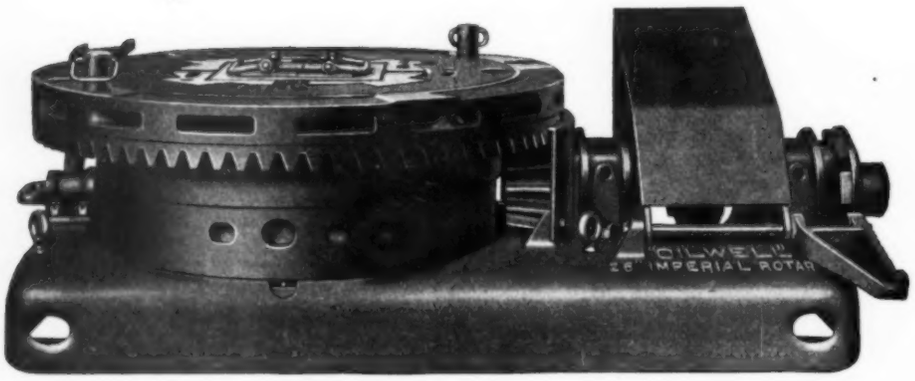

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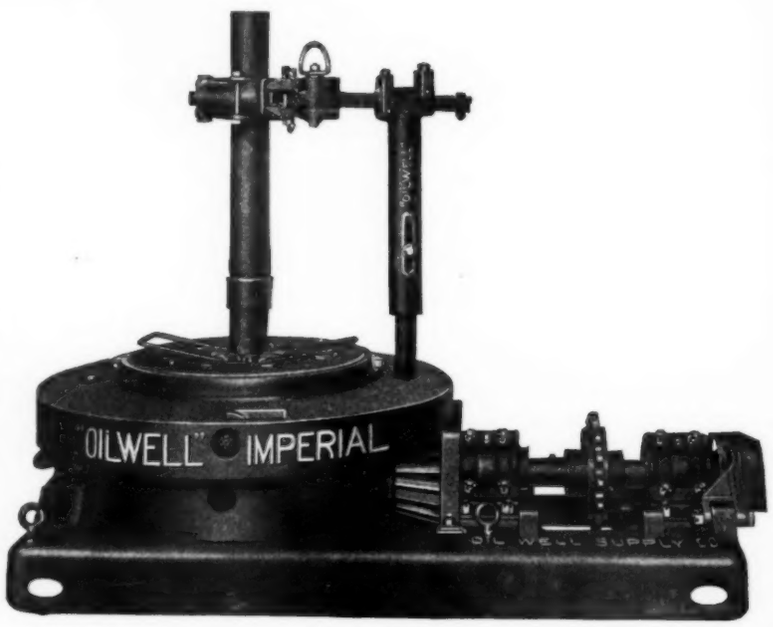

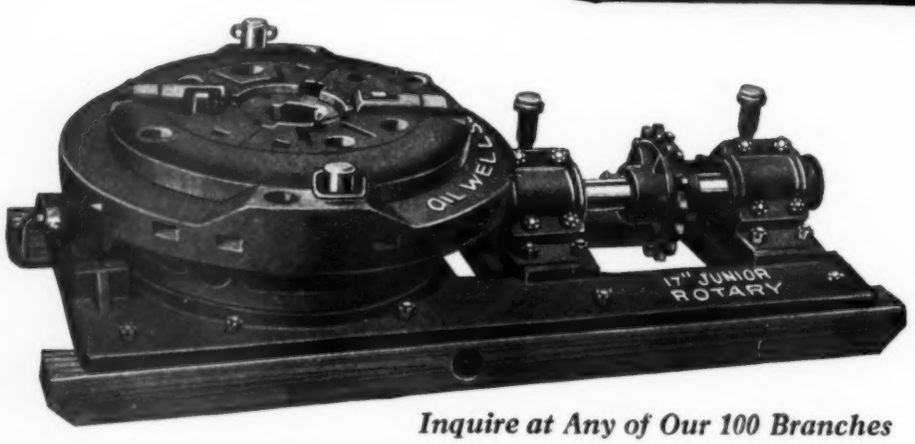

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Say you saw it in The OIL WEEKLY

Seminole Operators Providing Ample Storage

Growing disposition to hold oil rather than sell it at present low prices; handle 325,000 barrels out of field

By ROYE MUNSELL
Staff Representative

OF the 360,000 barrels of oil being produced daily in the Seminole district, an average of about 325,000 is being moved out by pipe lines and tank cars. The amount handled daily by tank cars is around 25,000 barrels. The remainder, or the amount handled by pipe lines is approximately the field's outlet capacity by that carrier.

Projects for other lines and added facilities, which are already being carried out and near completion, are expected to bring the capacity of the ultimate outlet for the field up to 400,000 barrels daily, or better.

The new 10-inch line of the Empire Pipe Line Company from Seminole to Cushing is being tested and made ready for operation. It is expected to move between 30,000 and 40,000 barrels daily. The Pure Oil Company can handle an additional 12,000 barrels now with its six-inch line from Seminole. The Ozark Pipe Line Company (Roxana) has just finished work on a new four-inch line which parallels the older line to Cromwell. This line and the six-inch line to Stroud will about double that company's carrying capacity.

All of this coupled with the fact that there are already some 6,000,000 barrels of available storage in the field, and also that additional storage is well under construction or definitely planned, is not without some significance, and suggests an interesting situation.

During the past week the several fields at Seminole made a new peak of 374,482 barrels. That was the gauge of the output during the 24 hours ending 7 a. m., Saturday, June 4. The estimate on what the ultimate peak for the district will be varies, of course, like all estimates will. A pretty generally accepted estimate of the ultimate peak is 375,000 barrels. Estimates that it will go as high as 500,000 barrels daily seem to be pretty far out of line.

The Searight and Seminole City fields are out of the picture. Both fields have long since passed their peaks, and are on the decline, which makes them a negative rather than a positive influence. Bowlegs and Earlsboro are still making individual peaks, but being worked as they are, they are barely maintaining the district's output from day to day. The completion of several large flush producers over a comparatively short period of time has only a momentary effect on the total output. The average well falls off rather rapidly from its initial output, even when produced with the air gas lift.

Such being the case, with all of this pipeline capacity on the one hand, and field storage capacity on the other hand, one might expect to find the producer and the pipe line slightly at cross purposes, and also a little competition between pipe line operators for oil.

That is precisely what one does find there. The situation is barely perceptible, to be sure, but there is apparent the tendency toward a slight tightening of the crude market in the Seminole district. It is known that in more

Storage Tanks at Seminole

Company and Location—		Comp.	Size	Stock	Remarks
Amerada Pet. Corporation	7- 9- 6	16	55	688,291	6 55's bldg.
	3- 8- 6	5	55	22,532	1 55 grade
					4 locations.
Barnsdall Corporation	18- 9- 5	4	80	181,797	1 grade.
					5 80's bldg.
	11- 9- 5	4	10	28,409	
	15- 9- 5	1	55	70,727	
Carter Oil Company	3- 9- 6	3	55	161,168	
	34- 9- 6	19	55	861,450	
Mid-Continent	34-10- 6	1	55		
Crosbie	9- 9- 5	1	55	13,800	2 55's bldg.
Empire Companies	18- 8- 7	1	80		2 80's bldg.
					1 grade.
	14- 8- 6	2	80		
Gypsy Oil Company	10- 9- 5	5	55	168,974	1 55 bldg.
Foster Oil Company	24- 9- 6	1	80		2 80's bldg.
Independent	25- 9- 6	2	55		
I T I O Co.	13- 8- 6	4	80	34,572	2 55's bldg.
					1 80 bldg.
	15- 8- 6	4	55	157,152	2 80's bldg.
	26- 8- 6	1	80	7,106	4 80's bldg.
	22- 8- 6	5	80	140,332	6 80's bldg.
	31- 9- 7				8 80's bldg.
					4 80's bldg.
	28- 9- 7				6 80's grades.
	24- 9- 6	4	55	165,993	
	26- 9- 6	2	55		
Magnolia Pet. Company	27- 8- 8	25	55	784,217	12 planned, 4 bld
					8 locations.
	27- 8- 8	39	55	2,018,035	
McCullough	22- 8- 6				1 bldg.
Mid-Kansas O. & G. Co.	25- 9- 7	1	55		
	3- 8- 6				1 55 bldg.
Philmack Company	15- 9- 5	1	80	47,400	
Phillips Pet. Company	9- 9- 5	1	55	16,604	
					5 80's location.
					1 80 grade.
	27- 9- 6	1	55		2 80's bldg.
Pure Oil Company	26- 9- 6	2	55		
	28- 9- 6	25	55	63,256	
	33-10- 6	8	55	215,652	2 55's grades.
Prairie Oil & Gas Company	22- 9- 5	2	55		
	27- 9- 6	4	55		4 55's bldg.
Roxana Pet. Corporation	22- 9- 6	1	80	420,294	10 locations.
Sinclair Oil & Gas Company	3- 8- 6	4	80		
		1	55		
	33-10- 8	1	55	519,562	
Slick Oil Company	6- 8- 7	2	55		8 80's bldg.
Shaffer Oil & Ref. Company	36-9- 6	8	80		2 80's bldg.
Superior Oil Corporation	32- 9- 6	2	55	21,280	
Tidal Oil Company	25- 9- 6	3	80	92,650	
Turman Oil Company	3- 8- 6	1	80	77,500	2 55's location.
	34- 9- 6	4	55	46,742	
		221		7,034,495	

DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
PANHANDLE—								
Hutchinson County	968	520,150	537	931	107,125	115	19	144
Carson County	151	51,435	341	140	12,900	92	1	28
Gray County	137	41,085	300	133	12,255	92	11	31
Wheeler County	35	12,740	365	32	2,175	68	3	19
Totals	1,291	625,410	484	1,236	134,455	109	34	222
WEST TEXAS—								
Church & Fields	73	71,635	981	70	27,515	393	16	35
Gulf-McElroy	20	19,705	985	20	9,965	498	1	6
Totals	93	91,340	982	90	37,480	416	17	41
OKLAHOMA—								
Seminole District	546	691,271	1,266	501	365,751	730	68	410
CALIFORNIA—								
Seal Beach	80	127,882	1,598	56	53,810	960	47	109

than one case prospective purchasers have found little oil available. Not a few producers are getting reluctant to turn loose of their oil at the present low market price. They would rather store it and wait until a better price can be obtained.

As to the disposition of the oil being produced at Seminole see under "Disposition" in the Seminole district gauge carried in this week's issue.

Some idea of the amount of storage already constructed in the Seminole district, and also the amount under construction, can be gotten from the accompanying table which was prepared early in the month.

Judge Bell Out as Head of Texas Department

Austin, Texas.—The resignation of Judge H. E. Bell as head of the oil and gas division of the Texas Railroad Commission was accepted Monday of this week "with regret" by the commission, and R. D. Parker, head of the gas utilities division, was named to succeed Judge Bell. Mr. Parker was at one time a deputy supervisor in the oil and gas division.

Judge Bell's resignation follows the recent amendment to House Bill 139, which was sponsored by Judge Bell in an effort to bring about conservation of the State's resources. One of the provisions in the new bill was as follows:

"The chief supervisor shall report in writing to the commission the names of all applicants who are found by him on such examination to be qualified for the position of chief deputy supervisor or deputy supervisor, and shall make such recommendations in connection therewith as may to him seem proper, and all appointments to such positions shall be made from the list of such approved applicants."

The commission amended the rule by eliminating the last part of the rule reading "and all appointments to such positions shall be made from the list of such approved applicants."

Judge Bell has served as head of the oil and gas division since the first term of the Neff administration and is well known and liked among oil men throughout the state.

Pipe Lines Refusing Connections in Texas Panhandle; Refined Market More Firm

Fort Worth, Texas.—Pierce Petroleum Corporation's eight-inch line extending from the Healdton field, Oklahoma, to the Pierce refinery at Fort Worth is now handling about 8000 barre's of crude daily for the Magnolia Petroleum Company on contract. Magnolia gathers and delivers Healdton crude to Pierce's Wilson station, south of Healdton, and Pierce transports the oil to Magnolia's refinery at Fort Worth. This pipe line arrangement was made because of Magnolia's current production and purchases in Oklahoma exceeding pipe line facilities. This crude averages 30 gravity, and Magnolia just recently completed cross cracking units at the Fort Worth plant.

Sinclair is displaying more interest in making new crude connections in Texas fields than any other major buyer, and early this week Sinclair started surveying for a 30-mile line from the Nocona field to the various fields and pools in Cooke County, Texas, where production is running above pipe line facilities of the Humble's system. Roxana built a small rack in the Muenster field, Cooke County, to ship its production to refinery at East St. Louis because of inability to get a connection from Humble. Sinclair is also taking on additional connections in Gray County section of the Texas Panhandle, having tied into the 2500-barrel well completed recently by Gulf on the Saunders land two miles northeast of production. Humble was taking this oil for purchase, but asked to be relieved of a part of the load.

The crude market situation in the Texas Panhandle failed to show any improvement over the past week, and connections are being turned away by Humble, while other major buyers in the field are slow in booking new accounts because of surplus steel storage being used rapidly, and very little building. The 10-inch lines of Humble and Gulf-Magnolia are now providing an outlet for about 65,000 barrels of Panhandle crude daily.

Spot crude sales in the North Texas refinery district have reflected the return of a firmer tone in the refined market, and premiums are being paid by local plants to the extent of about 10 cents above the posted price. Gasoline is the most popular refined product, and the movement of this commodity is gaining slightly with the arrival of warm weather and opening of the tourist season.

Tank car movement of crude production in the Hendricks field, Winkler County section of West Texas was started last week by the Southern Crude Oil Purchasing Company from its rack at Wickett on the T. and P.

Farish is Director in Standard of N. J.

New York.—At the annual stockholders meeting of the Standard Oil Company of New Jersey, held here recently, seven new directors were added to the board, six of whom are executives of subsidiary companies. These include W. S. Farish, president of the Humble Oil and Refining Company; J. A. Mowinckel, Christy Payne, H. Reidermann, J. H. Senior, G. Harrison Smith and C. O. Swayne. These additions give the board 16 members.

An increase in authorized common stock from $625,000,000 to $750,000,000 was also effected. This is to consist of 30,000,000 shares of $25 par value. A resolution eliminating the $200,000,000 of preferred stock, recently retired, as part of the authorized capital, was also approved.

Rio Bravo Completes Big Gas Well

Houston, Texas.—With the completion of Fee 6 by the Rio Bravo Oil Company at Pierce Junction recently, that field got one of the biggest gassers in its history. The well blew in from 4241 feet with a gas volume estimated at between 40 and 60 million cubic feet, and a pressure of 2000 pounds. There was a slight showing of oil at first but the well was closed in immediately and has not been opened since. Fee 6 is located near the middle of the field and is not an extension.

Plans are now being made for the Houston Pipe Line Company to take some of the gas. This company has a line near the field.

New Producing Sand Found in Arkansas Wildcat

Rovenger Oil Corporation get 50-barrel well in McCain 1, ten miles northeast of El Dorado

SHREVEPORT, La.—The Rovenger Oil Corporation has, apparently, uncovered a new producing sand in Union County, Arkansas, by the completion of its McCain 1 wildcat well, located in section 4-17-14, ten miles northeast of El Dorado, in the Urbana-Lawson area. The well was put on the pump last week at a depth of 2828 feet, and during the time that it has been pumped, it appears that it will develop into about a 50-barrel well. For the first 14 hours, the fluid pumped from the hole contained approximately 95 per cent salt water; but, during the succeeding 12 hours, produced practically clean pipe line oil, testing 28.1 degrees Beaume gravity. It is thought that, after the well has been pumped for a considerable length of time, it will show a material increase in gross production, due to the fact that a considerable amount of drilling mud is still being pumped from the hole, indicating that the sand is still saturated with this heavy fluid which may be holding back a portion of the oil. No further trouble from salt water is anticipated. After exhausting the 2200 feet of oil and water that had accumulated in the hole during the time that it was being bailed, the water seemed to be completely gone.

The oil produced from this well is entirely different from that of any of the other fields in Arkansas; and is, also, coming from a new producing horizon, 2828 feet. The surface elevation of the well is 152.0 feet, and the nearest corresponding sub-sea level depth is that of the Smackover field, and the sand in these wells carries a tremendous gas pressure; and is of a radically different texture, being very fine and light, while the sand in the Rovenger well is of a coarse nature, with a slight sprinkling of gravel. It is said that there is no producing sand in the state of the same character. Numerous refinery tests have been made of the oil and all of them are agreed that it is a new grade of crude oil. A report from one refinery states that the oil contains 14 per cent gasoline; 13 per cent kerosene; 33 per cent gas oil; 38 per cent fuel oil; 1 per cent basic sediment and water; and 1 per cent loss in running. It is thought that the gasoline recovery can be increased by approximately 10 per cent when run through a cracking plant. The above returns represent straight run only.

The Rovenger Corporation has about 2000 acres of land under lease around this well, all of which is in one block. The Ohio Oil Company also has a block of approximately 4000 acres under lease which joins the Rovenger block on the east. The Ohio Company has made location for another well in the southeast corner of the northwest quarter of the northwest quarter of section 1-17-14. A string of 4¼-inch casing has been set in their Crain test in the same section, and another test will probably be made early this week.

The Lion Oil Refining Company is rigging up on the second of three tests to be made in the western end of Union County, following the failure of their Murphy Land Company's No. 1 well, in section 23, abandoned last week at a depth of 3080 feet. The present well, Patee 1, will be drilled in section 20-18-18, just across the line from Columbia County.

Casing has been set in W. C. Adams' Southern Lumber Company well in section 12-12-12, Bradley County, and a test is scheduled to be made some time this week of a sand encountered at a depth of 2200 feet. The work of making this test has been seriously delayed on account of various forms of bad luck, ranging from high water to a stuck drill stem. All of this trouble has now been overcome, however, and the well will probably be bailed this week. Permit for a rank wildcat appears in the list of drilling permits issued by the Department of Conservation and Inspection last week, in the form of the Arkmo Oil & Gas Company's Gossett 1, in Clay County, located in the extreme northeastern corner of the State, just below the Missouri line, in section 29-21n-8e. The Schaffer Oil & Gas Company have abandoned its Long Bell Lumber Company test, in section 26-5-12, Grant County, at a depth of 3320 feet. The formation in the bottom of the hole was paleozoic rock.

Louisiana

The Arkansas Fuel Oil Company completed another producing well in the Pleasant Hill field last week. Its Logan 1, located in section 33-10-12, about midway between two producing wells, was brought in from a depth of 3238 feet, flowing at the rate of 440 barrels a day. It was drilled into the sand a total of 45 feet, and the bottom eight feet of hole was logged as shale. The Louisiana Oil Refining Corporation is coring in Logan 1, section 28, at a depth of 3193 feet. This well should be completed early this week. The Woodley Petroleum Company's Robinson well, in section 33, south of the present producing wells of the Arkansas Fuel Oil Company, is shut down for fuel after having been deepened to a depth of 3308 feet. This well is the second dry hole to be drilled in the field since it was discovered, in February of this year. This is not strange in view of the fact that it was predicted from the first that the field would not be developed in either the south or east directions; and both of these wells are in that direction from the field. The first of these dry holes was the Ohio Oil Company's Cook test in Section 34, situated due east of the field. The Louisiana Oil Refining Corporation's well is being watched closely for the reason that it is located directly in the predicted trend of production; and, if it is a successful completion, it will probably mark the start of an active drilling campaign in this direction. The Arkansas Company is also expected to complete two, and possibly three additional wells during the week.

H. M. Roark has abandoned the first of his structure tests to be drilled on the edge of the Southern Mineral Company's limestone quarry, located on the Winnfield salt dome, in section 19-11-3w, Winn Parish; and has made location for a second well, to be drilled in the same section. The first hole was abandoned at 900 feet, after penetrating 431 feet of lime and about the same amount of salt rock, going immediately out of lime into the salt bed. These tests are being made with cable tools, and a total of 41 days was consumed on the first well.

The Hoosier Oil Company brought in a 750 barrel will in the Dolet Hills section of De Soto Parish, last week, when its Lanier 1, in section 5-11-11, was completed as a flowing well, from a depth of 2582 feet. This is the largest well to be completed in this section in some time.

Navy Department Claims Teapot Estimate Stands

Washington. — The Navy Department has denied reports that the Teapot Dome reserve is being drained and says that production is showing only a normal decline. Government figures on the reserve for April shows 25,217 barrels from 61 wells, against 38,959 barrels from 62 wells in April and 31,277 barrels in March, 1927.

Navy Department officials claim that the original estimate of 30,000,000 barrels recovery for this reserve still holds good, although present production is coming from deeper sands and not from the discovery sand, which has developed water, and which was the basis for the original estimate.

Oxford, Kansas, Ordinance Provides "City Block" Rather Than "Town Lot" Drilling

By GEORGE REID
Staff Representative

Oxford, Kan.—After several weeks of argument between oil operators in the new Oxford townsite field and the city council, a decision in the matter of town lot drilling was arrived at in the early morning of June 2 after an all night session. Two Roxana Petroleum Corporation geologists were present at the meeting, which was attended by a large number of citizens of Oxford, and the council's legal talent. The Roxana, being discoverers of the new pool, and holding leases on nearly half of the townsite, was represented in the discussion as to how the drilling of townlot holdings should be regulated. The discussion resulted in the city council passing an ordinance covering development of the townsite, thus throwing some light on how the drillers may proceed.

The chief feature of the ordinance is that there shall be but one well drilled to the city block. If more than one producing sand is found, then additional wells may be drilled, but only one well to each sand on each block.

The ordinance does not regulate drilling on outlots of the town, so that the Roxana's No. 1 Emrich, which is on an outlot, although in the original survey of the city, is not affected.

The ordinance is of importance to the oil industry, in that it established a precedent wherein city government regulates the exploitation of town lot drilling with the view of permitting the oil operators and land owners both to profit, but does not permit the usual mad scramble of townlot conditions, which has the general result of showing little or no profit on the venture. In addition, the city is protected in some measure, and it becomes unnecessary for home owners to move their residences and turn the area affected over to the driller for oil field purposes exclusively. The city is attempting to prevent a duplication of such conditions as existed at Burkburnett, Long Beach and Huntington Beach and other localities which have been converted into scenes of destruction through a wild orgy of drilling. The ordinance practically makes each city block of the town a separate community lease where n all owners of property on the block share alike in the royalty derived from oil produced within that small area. It is believed that the Oxford ordinance has much to commend it to other towns and cities which are affected in a like manner. Also, because the scramble and rush for oil sand by a great number of operators is eliminated to a great extent, the ordinance effects a saving to the oil industry. Under regulations such as are imposed at Oxford, the duplication of an economic fiasco, such as Los Cerretos, at Long Beach, is certain to be avoided.

The ordinance, which is a long one, consists of the following principal features:

1. There shall be but one test drilled to the regular city block, unless more than one horizon is found productive, then as many tests may be drilled as there are productive sands.

2. If more than one leaseholder owns leases in the same block, then the leaseholder having the largest amount of that block shall be given the first right to apply for permit. If he does not apply in due time, then the other and minor lease holder shall be given the right to drill.

3. Under any arrangement, whether all of the lots in the block are leased or not, each feeholder shall share in the one-eighth royalty in proportion to the square feet he owns as to the whole block.

4. Should two or more leaseholders own acreage in a block the permit to drill shall be granted the one in accordance with paragraph two. The leaseholder not given permission to drill in that block shall have 20 days in which to join in the expense and profit of the successful permit-seeker, and if he does not join, then his rights in the block shall be considered forfeited.

Fire Prevention Measure

5. All rigs and machines shall be housed in metal sheeting for fire prevention. All drilling outfits shall be equipped with fire extinguishers.

6. Each operator must post from $20,000 to $30,000 bond for payment of damage to city property, should any occur, the amount to be fixed by value of property and as to location.

7. There shall be but four tests drilled on the school house tract unless more than one productive sand is encountered.

As to the influence the ordinance would have on those operators already started in the townsite, the general impression is that they will not be molested and that they will be allowed to proceed, since the ordinance was passed after they started. They will, however, be asked to comply with the ordinance in future operations.

Meanwhile operators are busy digging slush ponds, hauling in machinery and rigs at a half dozen locations in the townsite area.

In the southwest part of the city the Roxana Petroleum Corporation is drilling ahead in shale at its Emrich 1, which was good for 150 barrels a day from the Topeka lime at 1255 to 1270 feet. Drilling deeper in this well found water at 1575 feet, had a hole full of water at 1620 to 1680 feet and it is now drilling at 1700 feet. The upper Hoover sand is expected at 1850 to 1900 feet, and the Stalnaker sand at 2050 feet. Roxana's well is running about 60 higher on the structure than H. E. Wasson's failure at Buffington 1, a half mile west of present drilling.

Bald Mountain Wildcat Makes 400 Barrels

Bakersfield, Calif.—After deepening to 2074 feet the Elbe Oil Company's wildcat well on Round Mountain was brought in for 400 barrels of 15 gravity oil, which is a little better grade product than that produced at the Kern River Front.

Notwithstanding its seeming failure at shallower depths, the final production test given the Round Mountain wildcat of Section 20-28-29 has given rise to a leasing campaign of unusual vigor. Practically all close-in acreage or that which is held to have even a chance of future production, has been taken up.

Interesting points in the reading of the wildcat's log follows: 1990 to 1997 feet, loose oil sand; 2037 to 2049 feet, brown shale with streaks of oil sand; 2049 to 2069, saturated oil sand; 2069 feet to 2074, brown shale showing oil. A 6¼-inch oil string landed in the well includes 675 feet of perforated pipe.

Although the present condition of California's industry seems to guarantee conservative developments for the Round Mountain field, those who have taken leases around the project include the following: Kenneth Lilly, Bakersfield attorney; Charles Bloemer and H. J. Brandt; General Petroleum Corporation, Earl Shaw, Geo. F. Getty, Landon Osborn, B. M. Tibbets, Olive N. Davis, and A. J. Matthews.

The Elbe Oil Company's wildcat tract is located 18 miles northeast of Bakersfield. L. S. Barnes, president of the Elbe Oil Company, is the man responsible for getting the wildcat well.

Large close-in leases are held by the Marland Oil Company and the Shell Company of California.

Advance Work on Line

Greybull, Wyo.—Good progress is noted in the laying of 75 miles of pipe for the natural gas line from Little Buffalo Basin field to Nowood which is being laid by Midwest Refining Co. and Ohio Oil Co. Line is to cost $1,300,000 and is to be completed July 1.

Shut Down Agreement Works in Kansas Field

Drilling is restricted to four wells, and but for insistence of land owners all would be shut in

By ROYE MUNSELL
Staff Representative

There have been several attempts on the part of operators in the Mid-Continent to get together and hold back the development of newly discovered areas of apparent sizable production. With but few exceptions, for one very patent reason or another, such agreements were never really started. Of those that were started, a goodly number were never carried to successful fruition.

One that has actually been started and is being carried out is in the new Lost Springs field of Marion County, Kansas. The field is located in township 17, range 4, near the town of Lost Springs, Kansas.

There are at present two completed and producing wells in the field. By mutual agreement among the several operators interested in the field, there will be only two more wells added during the present period of over production.

Two Offsets

In brief, this is the situation and the way the agreement works. One well is being drilled as an offset to each of the present two producers. These two offsets will be drilled into the pay. Until they are drilled in, the two wells already producing will be produced in the customary competitive manner. As soon, however, as the offsets are drilled in, all four wells will be restricted to an output of 50 barrels per day each, which means a total daily output for the field of 200 barrels.

The two wells already drilled into the pay and producing are making about 950 barrels daily. The discovery well, the Winters & Harwood and Phillips Petroleum Company Reznicek 1, in the southwest of the northwest of 22-17-4, has an output of 300 barrels daily while being pumped through two-inch tubing. The second producer, the south offset to the discovery well by the Phillips Petroleum Company in the southwest of the northwest of 22-17-4, is making around 600 barrels daily on the swab.

It is believed that the discovery well would produce about the same amount of oil as the south offset were it retubed with three-inch and pumped more intensely. The operators, Winters & Harwood of Wichita, Kansas, explain that just now they have no desire to lift a large amount of oil to the surface.

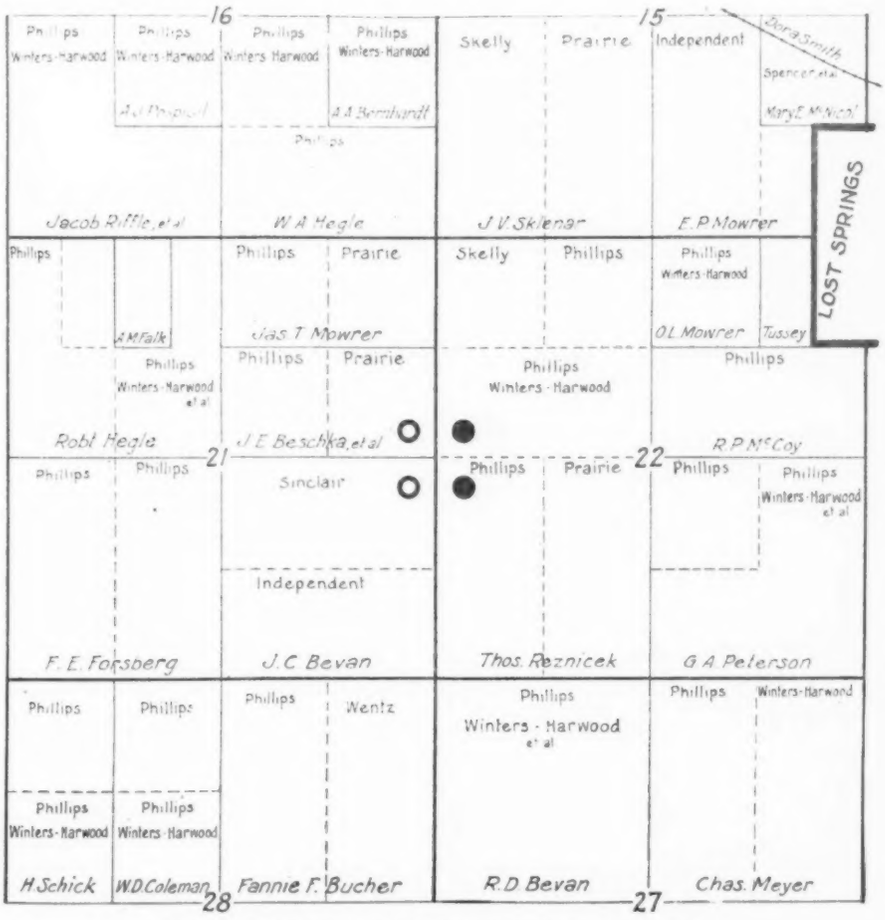
How Acreage Is Held

A glance at the accompanying map of the field, which shows how the acreage is held, will show that the usual competitive development there would soon result in at least a score of wells, the output of which would very likely be as high as six or seven thousand barrels daily. The pay is the 2400-feet chat and only a comparatively short time is required to drill and complete a well in it.

This agreement to restrict the development and output of the field was entered into by the operators with the consent of the fee owners under the leases. Had it been possible to shut-down the discovery well entirely, it is likely that the development of the field would have been completely abandoned until the crude price is stronger. Land and royalty owners would not consent to the complete shutdown, it is reported.

The Sinclair Crude Oil Purchasing Company is taking the oil from the field. It has a three-inch line to a loading rack on the Santa Fe railway at Lost Springs. The oil is moved from that point by tank cars to the Kansas City district.

A. W. Smith and G. R. Miller of the Carter Oil Company Casper offices have been transferred to the company headquarters at Tulsa. R. W. Loucks is to remain in charge of the Casper office.



LOST SPRINGS FIELD, MARION COUNTY, KANSAS

Standard of Indiana Interests Planning Third West Texas Pipe Line

San Angelo, Texas.—Having completed a preliminary survey and cost estimate on building a trunk line system from Winkler County, via the McCamey district, to tidewater at Aransas Pass, the Southern Pipe Line Company, subsidiary of the Pan-American Petroleum & Transport Company, is being counted on to furnish the third trunk line outlet for West Texas crude production. The survey and cost data on such a project has been delivered to the Chicago headquarters of the Standard Oil Company of Indiana, which controls the Pan-American, and a decision on the line is expected shortly.

Approximately 500 miles of pipe would be required to construct the line planned by Southern, and Winkler County would be the field terminus since the Southern Crude Oil Purchasing Company, Pan-American subsidiary, has a large amount of potential oil producing leases in the Hendricks field. According to reports, the Southern line would be made up of eight and ten inch pipe between Winkler County and the McCamey district, while ten-inch pipe would be used from the latter point to the Gulf Coast. The bulk of the crude delivered at Aransas Pass would be for consignment to the Destrehan, Louisiana refinery of the Pan-American, using a fleet of barges to transport the oil from Aransas Pass to Destrehan. The Southern Pipe Line Company is the second largest purchaser of West Texas crudes, and is using tank cars for delivery from McCamey car racks to Texas City, thence via barges to Destrehan. Southern's production and outside purchases in the Hendricks field, Winkler County, is going to field storage, although a connecting line with large tank car rack on the T. & P. Railroad at Wickett, Ward County, has been completed and tested.

Daily production in West Texas averaged 108,145 barrels from 801 flowing, and pumping wells during the past week, with production partially pinched in the Hendricks and Yates fields, while current field work practically assures a substantial gain for the future.

The Yates field, Pecos County, has the greatest amount of shut in production, but some relief is in sight before the middle of the summer, as the Illinois Pipe Line Company is at work in parallelling its original six-inch line to McCamey with an eight-inch line. The two lines will afford an outlet for more than 30,000 barrels daily, while the six-inch line is now delivering about 11,000 barrels daily to Humble on contract at McCamey. The United Producers Pipe Line Company, subsidiary of Transcontinental Oil Company, has made no definite plans to build a line from the Yates field to tank car rack on the Orient Railroad, although a preliminary survey was made last month from the field to a point near the Big Lake field, Reagan County.

Humble Pipe Line Company's new trunk line system from West Texas to tidewater at Corpus Christi will head south from Kemper Station, Reagan County, instead of McCamey, as originally planned, and the number of pump stations has been reduced from 11 to seven. Humble is building a second combination eight and ten-inch line from McCamey pump station to Kemper, running parallel with the line now in use. Humble has a double eight-inch extending east from Kemper to Comyn, Comanche County, thence to the Coast, near Houston. The stringing of ten and 12-inch pipe between Kemper and Corpus Christi for Humble's line is well underway, and additional gangs are being recruited to speed up the completion.

Gulf Pipe Line Company is beginning to release pipe line gangs on its Midland-Ranger trunk line project, and only about 50 miles of line remains to be laid before West Texas crude can be pumped to the latter point. The camps and gangs released from the Midland-Ranger unit are being distributed between Ranger and Lufkin to carry out the 447 mile project started late in April.

Trinity Sand Test Near Mexia to be Deepened

Mexia, Texas.—Casing trouble has developed in the Trinity sand test on the west edge of the Mexia field, and the owners are somewhat doubtful of saving the hole to get a decisive test of the formation furnishing gas production at 5752 feet. This deep test was drilled by Humble, Magnolia, E. L. Smith Oil Company et al on the Jake Steubenrauch 15-acre lease, and recently gauged five million cubic feet of gas daily, testing .85 of a gallon of gasoline per thousand, with 6¼-inch extra heavy casing at 5632 feet, and 9¼-inch casing cemented at 3602 feet. The 6¼-inch casing corkscrewed while an effort was being made to remove bridge from below the pipe, and late reports from the well indicate that the rotary drill pipe can not be lowered, or the casing pulled.

The Mexia deep test was drilled to 5500 feet on contract by Farrish-Watts & Collins, and the promoters of the project have been paying $20 per foot for all hole made below the contract depth. Humble and Magnolia own a third interest in the well and lease each, while the other third is divided among Mexia companies and operators. The former two companies voted to abandon the test at the present depth but there will be an attempt made by Mexia operators and business men to make further efforts in proving the deep pay. Magnolia and Humble have agreed to assign their interest in the lease and well to Mexia parties, and the latter will try to run a string of 2½-inch drill pipe to drill deeper.

Magnolia Petroleum Company's Trinity sand test on the Corrie Marshall farm, near Rice, Navarro County, obtained an oil saturated core in sandy-lime formation early this week at 4354 feet. This test was drilling with rotary, using four-inch drill pipe, when the core was taken. The oil showing in the core will result in 5 3/16-inch casing being run to make a test.

Pandem Oil Corporation's Trinity sand test on the Bassett farm, near Kosse, Limestone County, was drilling in lime with rotary at 4785 feet early this week, with no further showings of oil or gas.

Elk Hills Pays Treasury $11,000,000

Washington, D. C.—Approximately $11,000,000 in proceeds from royalty oils obtained from the Elk Hills naval oil leases in California have been turned over to the United States treasury, it is disclosed in a report to Secretary of the Navy Wilbur by Rear Admiral H. H. Rousseau, receiver for the navy.

Receivership of the oil reserves was taken over by Admiral Rousseau in March, 1926, after they had been ruled the property of the navy department despite the lease on oil rights held by the Pan-American Petroleum & Transport Company. In his report, the Admiral stated that on June 1, $5,405,000 in cash had been turned in to the treasury and on June 2, Liberty Bonds with a value of $5,608,000, including interest, were turned in. This money represents the accumulation of receipts from oil during the time the Elk Hills reserves have been in the hands of the receiver after they were turned back to the navy department by decree of the United States Supreme Court.

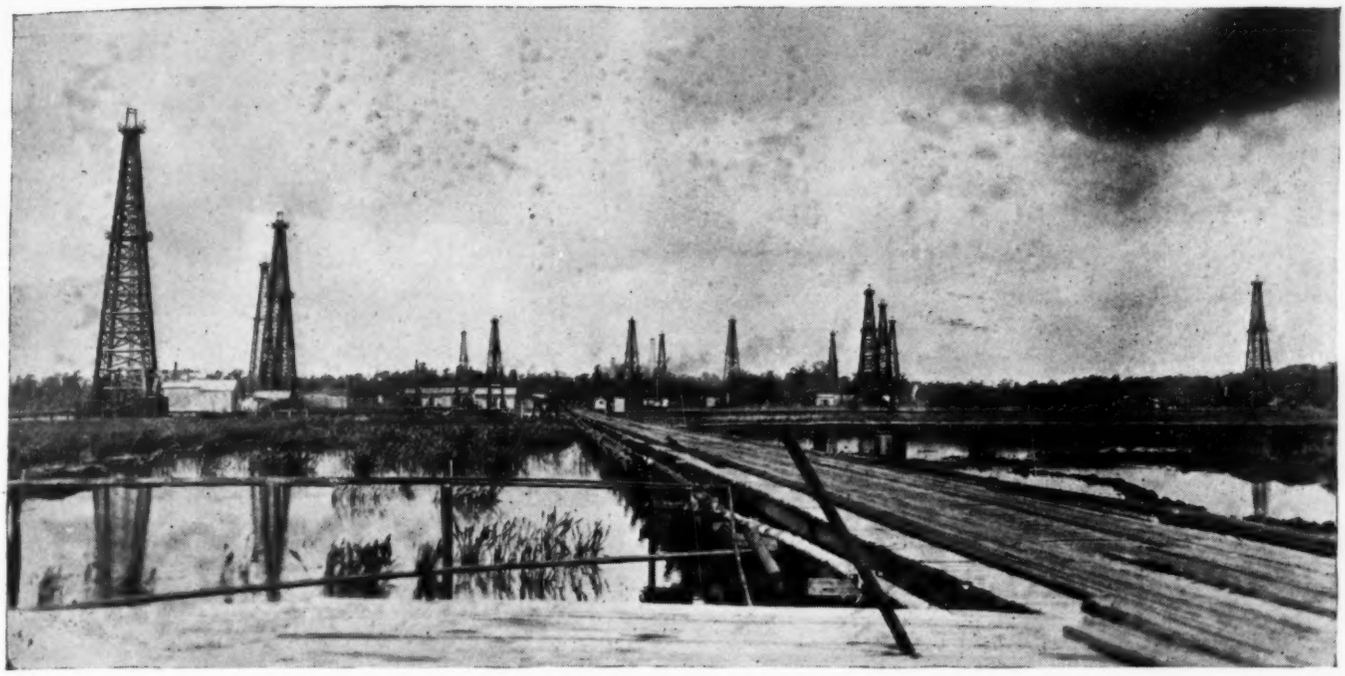
A. P. I. Wants Question Sheets Returned

Dallas, Texas.—In connection with the coming meeting of the American Petroleum Institute at Colorado Springs, next week, it is requested that as many of the questionnaires that were sent out to all the principal oil companies be returned.

It is important to have all available information as to the nature and extent of the corrosion problems at hand by June 15, as a guide in planning the work.

Any suggestions as to methods of organizing and attacking the problem will be appreciated by the corrosion committee.

Questionnaires should be returned to F. N. Speller, 1810 Frick Building, Pittsburgh, Pa.



GENERAL VIEW OF THE LOCKPORT FIELD, SHOWING BRIDGE ROADWAYS WHICH PROVIDE ACCESS TO THE WELL LOCATIONS

Vacuum Gives Lubrication Special Attention at Lockport

Field in swamp presents many operating problems which have been efficiently overcome

By A. R. McTEE
Staff Representative

CERTAIN oil fields lend themselves to unusual development because of concentration of acreage in few hands. The Lockport area, Calcasieu Parish, Southern Louisiana, falls into this class and is a good example of how a company can effect conservation when not forced by competition to overdrill its property.

Since its discovery late in 1924, the field has been exploited systematically and slowly, with practically no waste of oil or gas, so that today the district gives promise of having extremely long life. Of the 16 producers, all but five are flowing. Four of the wells are on the beam and one is being blown by air. The present outpu of the field ranges between 6500 and 7000 barrels daily.

Located as the field is, in a Louisiana swamp that stands several feet under water the greater part of the year, it presents multiplied operating difficulties. Add to the usual problems of drilling in wildcat territory that of moving and handling all material over a body of water and you have Lockport.

It follows naturally, that road building is one of the foremost obstacles to be overcome. When the Vacuum Oil Company began operations in the area, it had to feel its way with a road in front of it, just as it does today. More than five miles of elevated board bridge-road has been built in developing the field thus far and as new locations are staked the road has to be extended. Appropriations for this purpose are consequently a part of the yearly budget of operating expenses at Lockport.

Just at this time a different type of road is being tried out which will materially lower the cost of construction if it proves successful. On this trial section, the mud has been graded up above water level and the board surface laid on this. All the old road was built on scaffolding with matting under the main supports. So far the new section has given satisfaction but it will probably be tried throughout the rest of the year to take advantage of any high water conditions, that the test may be thorough.

Mud Fire Walls

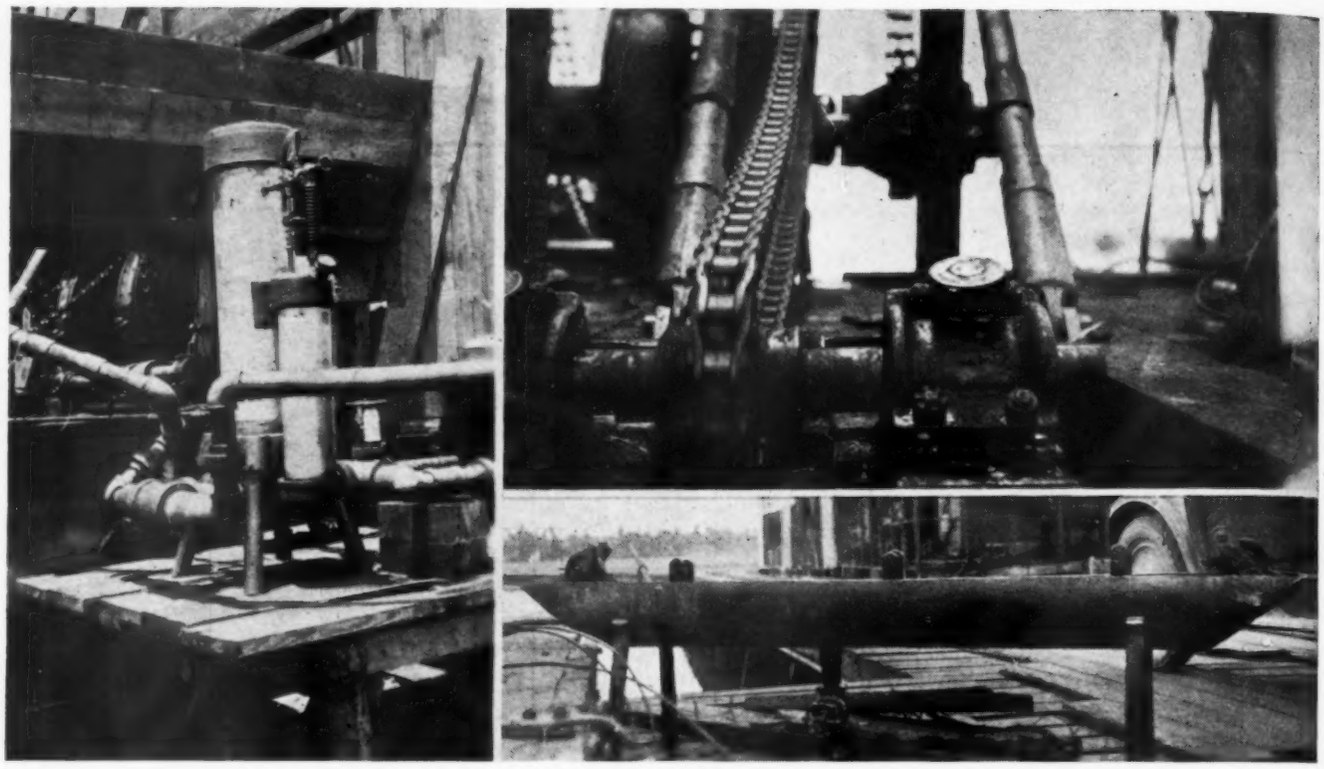
This new plan of construction is really a by-product of ditching between the wells to protect them from fire. A network of canals from four to six feet deep and about 20 feet wide is a part of the fire prevention scheme, and it was decided to take advantage of the mud from these canals to form a roadbed. It might seem strange that there could be a fire hazard when the wells are surrounded by water. However, when one remembers that the water is covered in many places by a thin film of oil, the great danger from fire can be realized. The canals help break up the oil film and with the mud banks between them, they make excellent fire walls.

Generally speaking, operations at Lockport follow the usual procedure in the Texas and Louisiana Gulf Coast. There are a few features, however, that may interest operators elsewhere, which the Vacuum has worked out.

To talk about the need of mud in the middle of a swamp sounds as foolish as the old saying about the fellow who couldn't see the forest for the trees. And yet, rotary drilling mud is a problem at Lockport. The mud is all mixed in a vat on the edge of the swamp and is pumped, in some instances as far as a mile to where it is needed. As is generally known, mud of the proper consistency plays an important part in rotary drilling, and the swamp mud cannot be used.

Lubrication

Lubricating wire lines before they are used in the field has proved economical



LEFT: VOLZ LUBRICATOR TO LUBRICATE STEAM ENGINE AND PUMPS. UPPER RIGHT: SPECIAL OIL CUPS ON DRAW-WORKS, IN WHICH WICKS ARE USED TO DRIP OIL ON THE BEARINGS. LOWER LEFT: VAT USED TO LUBRICATE WIRE LINES BEFORE THEY ARE PUT INTO SERVICE.

in the opinion of Vacuum superintendents. Special equipment for this purpose has been devised to make the greasing as effective as possible.

The lubricating vats were made from pieces of casing, the size depending on the amount of service required. The ends were sealed and several small pulleys fastened to the interior to hold the cable in place while it is drawn through the oil. On the under side of the vat is a stop-cock through which drainage is accomplished when the oil is to be changed. The vats are mounted on legs, and are from six to eight feet long.

Before cable is spooled on the drum, it is dragged through one of these vats filled with hot lubricating oil. The process is repeated as often as necessary to keep the lines well lubricated.

Another lubricating feature in use by the Vacuum is what the company engineers have called the "wick-feed" system. Special oil cups have been made and put on the machinery where extra lubrication is necessary. Oil trickles from these cups through wicks onto the moving part. These cups are used on the rotary draw-works, engines, and crown blocks. On the crown block the cup is set so that oil drips on the line just where the line and sheave make contact. By increasing or decreasing the number of wicks, the amount of oil that drips on the part being lubricated can be varied. A dark lube oil is used in these cups.

Through the use of Volz lubricators, the Vacuum has solved the problem of keeping steam pumps and engines lubricated. The lubricators are installed on the steam line as close as possible to the engine or pump and oil is mixed with the steam before the steam enters the engines or pumps before the oil comes in contact with it. In connection with the lubricator is a steam trap which takes water out of the steam. About five quarts of oil per day is required to lubricate the pumps and engines on one job.

Most of the crude produced at Lockport has to be treated and after all the water possible and other foreign matter has been settled out, the oil goes through a battery of Petroleum Rectifying tanks where it is converted into pipe-line product.

SAFETY SIGN AT ENTRANCE TO LOCKPORT PLANT

Transportation

The Lockport field is well situated as regards transportation facilities: A tank farm consisting of six 80,000 barrel tanks has been built on the Calcasieu River, near the field, and now Vacuum tankers are taking an average of 200,000 barrels of crude per month from Lockport to the east coast.

The pump station at the tank farm is equipped with two centrifugal pumps direct connected to 350 horsepower Westinghouse motors, capable of delivering 55,000 barrels of oil per hour at the docks.

Total storage capacity at Lockport, besides the gun-barrel tanks at the treating plants, consists of the six tanks at the tank farm, and two 80,000 barrel tanks at Rosebluff, a short distance from the tank form. Two more 80,000-barrel tanks are now being built. Thus the district will have 800,000 barrels of tank space, in addition to the small field tanks, within a short time.

Much care is taken to protect all equipment at Lockport. Field boilers are under sheds, tool houses are provided for each crew, steam lines are all covered with insulating material, and spare material is kept as closely as possible at the central warehouse.

The visitor's attention is drawn to the safety sign at the entrance to the office grounds as well as to the big sign over the entrance to the field road. The latter sign says "If You Must Smoke, Don't go on the Bridge."

Seal Beach Production Takes Upward Swing

Increase of 13,275 barrels in daily production is twice the flush yield of completions; re-conditioning of wells responsible

By WM. V. GROSS
Staff Representative

LOS ANGELES. — The townlot field of Seal Beach sprung a big surprise during the week ending June 4 when production there registered a 13,275-barrel increase, bringing the field's daily average up to 53,810 barrels. While the discovery that further penetration of the Selover sand could be effected without involving water troubles was responsible for a portion of the increase, most of it was due to reconditioned wells and an "opening-up" tendency on the part of those who had shut-in production.

Most absorbing of Seal Beach's present developments during the past week is the question of whether or not the Pan American (Petroleum Securities) has revealed a new sand in its Marquis 1. While authentic information on the depth is not available, it is believed the well was completed around 4900 feet, which would give it from 150 to 200 feet of penetration. (Wells heretofore completed have not gone into the sand generally more than from 14 to 35 feet). Although there is considerable debate on the subject, the theory commonly held is that the Pan American did not find a new sand, but that it merely has contacted a thicker portion of the Selover sand. It has been pointed out that it would be unusual if the thickness of sand underlying such an area as Seal Beach were uniform throughout. A possible maximum area of three city blocks may be influenced by the discovery, it is said. But the opinion that Seal Beach will ever reach its predicted peak of between 80,000 and 100,000 barrels is not seriously received.

Had Seal Beach operators not held with so much importance their fear of running into water difficulties, thus encouraging them to tap a little more sand, perhaps the area would have had a greater peak.

It is not felt that the temporary upward swing of Seal Beach's production curve will last long. Alamitos Heights section of the field is strictly a townlot proposition. This means drilling will be rushed as much as possible by the various organizations participating in the field's development and that the sands, consequently, will be exhausted rapidly.

Flush 6565 Barrels

Six wells brought in during the week at Seal Beach had an aggregate flush production of 6565 barrels, or an average of 1094 barrels each, which, although high with relation to the character of initials for the past three weeks, is low in comparison to the average initial production per well for the field to date. The 80 wells that have been completed at Seal Beach since its discovery by the Marland have an average individual flush of 1598 barrels.

Best among this week's new producers was the Marland Oil Company of California's McGrath and Selover 12 which made about 2000 barrels from 4844 feet after having cemented 8¼-inch casing at 4671 feet. Marland scored a second producer in its No. 11 on the same lease. This well, with the 8⅝-inch casing cemented on bottom, produced 1300 barrels. Horowitz 1 of the California-Eastern Oil Company produced 1400 barrels about 4775 feet. Horowitz 1 is producing 27 gravity oil and cutting only 0.3 per cent. It cemented 8¼-inch casing at 4628 feet. Petroleum Securities Company (Doheny), which has taken the initiative in deeper sand penetration at Seal Beach, did not do so well in completion of its Kellas 1, which made only 150 barrels when finished at 4795 feet. Kellas 1 has 6¼-inch, including 85 feet and three inches of 80 mesh pipe, landed on bottom. It is flowing 26.5 gravity oil and showing a cut of 1.4 per cent. Travis Drilling Company made its debut among producers at Seal Beach with completion of its No. 1 for 300 barrels at 4760 feet. The 6¼-inch, including 157 feet of perforated pipe, was landed on bottom, while the

Seal Beach Operation Details

Company—	Drlg.	Rigs	Lcn's	Prod.'s	Total Oprns.	Prod.
Fred Aitkin	1	..	..	..	1	....
Ahlburg	1	..	..	..	1	....
Associated Oil	6	2	3	8	19	11,630
T. Bailes	1	..	..	..	1	....
Bankline Oil	1	..	2	..	3	....
H. J. Barneson	1	..	1	1	3	360
R. Burns	..	1	..	..	1	....
California-American	..	..	..	..	2	....
California-Eastern	13	1	6	1	21	1,400
California Petroleum	6	2	..	3	11	2,650
Coastal Oil	1	..	..	..	1	....
E. L. Cragen	..	..	1	..	1	....
Dill-Comstock	1	1	..	..	2	....
Dominguez-Extension	1	..	..	..	1	....
Dudley	..	1	..	..	1	....
Dutton	..	..	1	..	1	....
F. Erwing	1	..	1	..	2	....
Fisher	..	2	..	..	2	....
General Pet.	2	6	2	2	12	135
Geo. Getty	7	..	1	7	15	10,345
Paul Getty	2	1	1	3	7	2,800
Hart & Co.	1	..	..	..	1	....
Hauser Pet.	1	..	1	..	2	....
Hughes-Richmond	..	1	..	..	1	....
Italo-American	1	..	..	..	1	....
Al Johnson	..	1	..	..	1	....
Sam Johnson	1	..	..	..	1	....
Loftum Oil Co.	1	..	..	..	1	....
Marland Oil	10	8	1	11	30	12,215
McCaslin	1	..	..	..	1	....
McAlpine	..	1	..	..	1	....
McCoy-Deeds & Cathers	..	..	1	..	1	....
A. N. McKrate	1	..	..	..	1	....
M. McVey	..	1	..	..	1	....
Miley Oil Co.	1	..	..	1	2	365
M. W. Pannill	1	..	..	..	1	....
Petroleum Securities	21	11	..	5	37	3,890
Rainbow Petroleum	1	..	..	..	1	....
Richfield Oil	2	..	..	..	2	....
Ring Petroleum Co.	1	..	..	..	1	....
Fred Roberts 1	1	..	..	..	1	....
Robertson, J. F.	1	..	..	..	1	....
Smithson & White	1	..	..	..	1	....
South Basin Oil	1	..	..	..	1	....
Standard Oil	3	1	..	9	13	6,275
Superior Oil	4	1	1	2	8	945
Travis Drilling Co.	..	..	..	1	1	300
Union Pet. & Drlg. Co.	..	1	1	..	2	....
Universal Cons.	3	..	..	1	4	300
Fred Walker	1	2	1	..	..	....
Waklin & Peacock	..	1	..	..	1	....
Wallace & Failing	1	..	..	..	1	....
J. G. Wheeler	1	..	..	..	1	....
White Eagle Pet.	3	..	2	..	5	....
J. Woodward	..	1	..	..	1	....
Totals	109	47	28	56	240	53,810

8⅝-inch casing was cemented at 4643 feet. Bryant 21 of the Associated Oil Company made 1416 barrels when put on production at 4873 feet. Bryant 21 cemented 8¼-inch at 4850 feet.

Condition of Producers

The 56 producers listed for the week do not include any except those that actually are producing. With the exception of George Getty and the Associated Oil Company, there is not a single producer in the field with more than three completions to his credit who is not having trouble with his wells. For example, one of the California Petroleum Corporation's four wells is having to be worked over; so is one of Paul Getty's. Out of 21 Marland completions, 12 are not producing. Pan American is getting oil out of only five of its nine completions. Fifty per cent of the Superior Oil Company's wells are producing. Out of 10 wells, the Standard has one that is being worked over and two that are producing more water than they should produce. In some of these instances, the fact that the wells are off production means they are being deepened for more penetration; in others, it's just a plain case of production troubles.

CULLED FROM THE NEWS

By Kent Ridley

THOSE of us who have an idea that all of Europe's hostility is settled on the United States and that France particularly pictures Uncle Sam as Shylock will be interested in the following clipping from Petroleum Times, London:

"In season and out of season our French Press has given us the impression that a good deal was being expected from the Mosul petroleum field. 'Thanks to the agreement of San Remo, we have a 25 per cent. share in the petroleum of Mosul' has been literally a keystone to almost every article on this question. We did not suppose, however, that some of our journalists would go so far as to expect that no matter who got out the crude petroleum 25 per cent of the production would have to come to France. Nor did we expect that when someone found out that there were more ways than one of looking at the matter, there would be a virulent attack on the British efforts in Mosul, and a fresh recourse to spleen which usually includes the expression 'perfides Albion.'

"The journal from which we make a few quotations below has taken its cue from one of the dailies of lesser importance, who gave a caricature of John Bull, with some dialogue intended to be clever, but failed for lack of 'point.' 'To thank us for having been, during the war, always and everywhere in the front ranks, and having sacrificed the best of our race in order to enable the Anglo-Americans to get rich, England was kind enough to give us Syria—a nice present. But she kept Mesopotamia and its petroleum fields, and, because she couldn't do otherwise, she allowed us a share in the exploitations of Mosul. In all reason we should have thought that this gave us the right to a percentage of the crude petroleum taken out. But the English want to shuffle out of that, and only allow us to be shareholders who will receive dividends (if there are any).'

"'Are we again going to allow ourselves to be outmanoeuvered by the crafty "business men" on the other side of the Channel, who have made it a habit for so many years to dictate their laws to the continental people when the interests of these latter are in contradiction with their own? We are in need of crude, and if the Compagnie Francaise des Petroles has been created by the French Government, surely it was not in order to play the humiliating role of simple shareholder of an English company. We must therefore assert ourselves with force, at the risk of displeasing the Government of His Britannic Majesty. The attitude taken up by the Bank of England in the discussions as to the French gold deposited shows that we shall not get anything from our costly allies if we do not speak out firmly.'

"All of this only goes to show how very soon some people forget the narrow shave they had of being swallowed up, and their country made a part of 'Great Germany'—and the principal newspapers changed to the 'Morgen,' the 'Zeitung,' the 'Arbeit,' and perhaps the 'Steinol.' Happily, we have only stumbled across some papers which do not count in the big scheme of things in France. But we have to be aware that there is no greater danger to public welfare than cranks in the editorial chairs."

One wise provision of oil tax distribution does exist. In Oklahoma the counties producing the oil get a one-third share of the gross production tax, which is again equally divided between the road and school fund. It is common justice that the producers paying the tax should have this direct return of their tax money to the points of operation, to be used in the construction of much needed roads and providing ample school facilities for the children of workers.

DO YOU REMEMBER?

Or Did You Ever Know?

1. What is the leading producing company in Roumania and its approximate monthly recovery?
2. How many producing wells are there in Roumania and how are they divided as to districts?
3. What oil field has the most producing sands?
4. Where was the first oil pipe line built?
5. From what formation is the Seal Beach field in California producing?
6. How many times has a typographical error in this department been called to the attention of the editor since it appeared last week?

(Answers on "Squeaks" page, this issue.)

NO. 1. COOKING VAT IN OPERATION

NO. 2. COOKING VATS USED FOR DEHYDRATING

The Treating of Heavy Oil Field Emulsions

By FRANK GARDNER
Chief Engineer Simms Oil Company, Dallas, Texas

GENERALLY speaking, agitation of crude oil and water in contact with air or gas usually creates an emulsion of varying intensities. Very few oil producing wells deliver oil containing less than 2 per cent of such emulsions. This has for years been known as B. S., basic sediment, bottom settlings, cut oil or roily oil, etc., and at one time was burned as waste in spite of the fact that as high as 60 per cent was merchantable oil when freed from water and sediment.

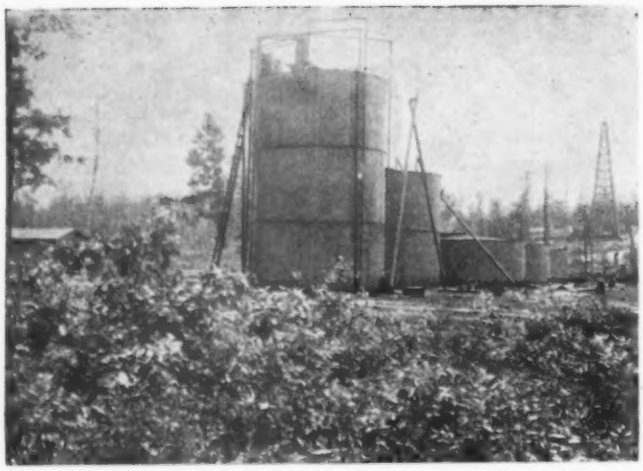
There are two types of these emulsions, water-in-oil and oil-in-water, and two classes or degrees rather, stable and unstable. The water-in-oil type consists of globules of water suspended in the oil or wherein the oil is the dispersing phase and water the dispersed phase. The other type is the reverse phase, i.e., the globules of oil are surrounded by water. The first type is more prevalent in the field. These phases can be interchanged by chemicals. The size of the globule in the dispersed phase vary greatly, in some cases they can readily be seen without magnification, in others, such as some that occurred in the gas cut oil from the third sand at Smackover at 200 diameters, they were not discernable. The size of the globule seems to have no effect upon the class of emulsion which appears to be a function of the surface tension of the film surrounding the globule, which in turn is influenced by a third substance in the interface. An emulsion that rarely occurs consists of minute particles of gas suspended in the crude oil. This came about in the Randado field near Laredo, Texas, when production was new there.

The purpose of any system of treating is to weaken the films surrounding the suspended droplets so that they will coalesce until their mass is sufficient to overcome the fractional resistance of the dispersing phase. When that occurs the two liquids will separate according to their gravities.

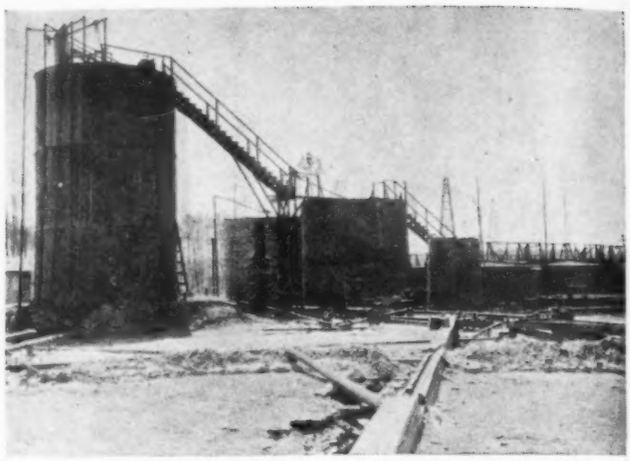
The most widely used method is one in which chemicals are used to break the emulsions. (The number of different systems using this method correspond roughly to the number of producers.) Electric dehydrators are used to some extent. Their field is limited to districts either where cheap electric power exists or where large concentration of cut oil is feasible. In some cases chemicals are used in conjunction with the electrical apparatus. As a general rule, it is not economically possible to concentrate the treating, so a unit type of automatic treater has been developed and been in operation for several years.

The development of this type dates from the discovery of the prolific Smackover field where an ideal condition existed for making perfect stable emulsion; water, low gravity oil and a large oil-gas ratio. Various types of the orthodox chemical and electrical treaters were tried. Some tried mixing the chemical in the stock tanks with gas, others used pipe mixers and fire coils. A few succeeded in treating the emulsion but the oil would still carry water over into the stock tanks that would not settle. Finally production overtook the treating capacity and the oil had to be stored as produced. As it is not economical to build steel storage for cut oil during flush production most companies built earthen

NO. 6. AUTOMATIC INDIRECT HEATERS, SMACKOVER, ARKANSAS FIELD



NO. 3. AUTOMATIC TREATING PLANT



NO. 4. PLANT FOR TREATING HEAVY CRUDE VOLUME

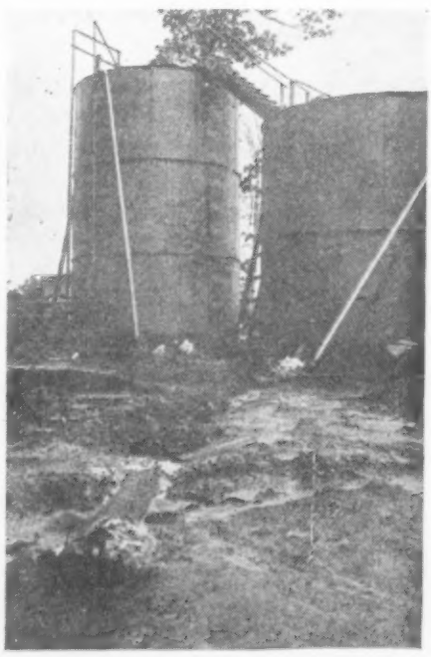
storage pits, some capable of holding 500,000 barrels. In nearly all cases efforts were abandoned to use the common type of treater and "cooking vats" were built. These consisted of shallow steel vats with steam coils in the bottom and the water was boiled out of the oil as it passed over the coils. The water and oil vapors were allowed to waste. Some of these cookers reprsented quite an outlay of money and capacities ranged up to 10,000 barrels per day. They were usually calculated to treat the current production and as such production declined the created excess capacity was used to treat the accumulated cut oil in storage. Pictures 1 and 2 are views of this type of treater. In some cases the producer preferred to store the currently produced cut oil rather than to treat and sell it at the posted price which was low, due to the large flush. During the late summer of 1923 there was in storage 5,168,000 barrels of cut oil and 8,279,000 barrels of pipe line oil (or oil with less than 2 per cent B. S.) This cut oil upon standing in pits became very stable, probably from oxydation and the formation of inorganic acids.

Some of the companies marketed this crude direct as fuel oil to the Middle West trade and had gained quite a volume of business based upon the oil's remarkable quality as fuel and also due to the fact that the oil was clean. This was before the oil was cut so badly or during that period before water encroachment occurred. Soon after the cooking vats were placed in operation complaints began to come in from the fuel purchasers. They were mainly registered around a white encrustation on the burner tips and stoppages of fuel lines, in spite of the fact that the centrifuge test showed less than 1 per cent of sediment. This brought about an investigation of treating methods and it was found that in addition to as high as a 12 per cent volumetric loss, that the evaporation of the water in the crude oil in the vats left the concentrated salts in the oil. Some of this salt collected around the pipes and in the bottom of the vats and had to be removed with picks while the remainder stayed suspended in the oil in spongy masses sometimes as large as a pencil eraser. Swings were raised in loading tanks and strainers put on loading lines, this was but a temporary measure and the 12 per cent loss problem still remained.

Treat on Lease

The first thought was that a central treating plant should be built and an efficient treating system installed that would effectively break the emulsions and remove all the water from the total production of cut oil. The difficulty of obtaining the royalty owner's consent to some sort of settlement was unsurmountable. This meant that the oil must be treated before leaving the lease. An investigation of practically all types of schemes was made in the laboratory and models built. Nearly 200 different chemical formulae were tried before a successful series was built up that would break the emulsion. Then a serious problem arose of coalescence to a greater extent than usual on account of the tenacity of the oil for water. This was corrected by packing a second tank or "gun barrel" with excelsior.

In certain cases where the emulsion was dry or "tight," it was re-emulsified with additional water under the theory that the extended surface would be easier broken. This was not true in the majority of cases and was not used to any extent.



NO. 5. WATER DISCHARGING FROM RECEIVING TANK AND GUNBARREL

As a result of such trials, plants were designed and built wherein the oil was pumped from the earthen pits or flow tanks at the same time a chemical solution was allowed to be drawn in the pump suction. Then this mixture was further agitated in perforated pipes before going to steam heaters. After heating it passed to the bottom of the excelsior tank or "gun barrel," where further chemical action took place and the excelsior dehydrated the oil. From the top of the gun barrel it flowed into the regular stock tanks as pipe line oil. Under this arrangement it was necessary to keep a boiler plant in operation and treating men in constant attendance. This was not uneconomical as long as the throughput was sufficient to keep the cost to around 2½ cents per barrel. Picture No. 4 shows this arrangement. The 24-foot tank is the receiving tank while the two 16-foot tanks are the excelsior gun barrels, the covered one was used for treating pit oil alone while the current production was large. The mixing pump is in front of the wooden chemical tank. The automatic heaters are not shown in the picture.

Picture No. 6 shows a battery of two heaters; one for pit oil and one for current runs, while the latter was high. The heated oil leaves the line carrying the thermometer and controls the thermostat in the end of the running tee which in turn controls the gas in the two-inch line to the burners. When the accumulated pit oil had been treated and production had gotten down to a pumping basis the labor raised the treating cost too high, so the system was made automatic and therefore the labor charge was practically eliminated. The elimination of the pumping operation necessitated a gravity system by having each successive tank lower than the preceding one. Pictures Nos. 3 and 5 show this type of plant. The chemical drums that are used for introducing the chemical into the overflow line on top of the receiving tank is shown; the heater is in the small house to the left

(Continued on page 38)

Fundamental Criteria for Oil Occurrence[1]

By FREDERICK G. CLAPP[2]

CRITERIA for oil occurrence are considered as being grouped into (a) fundamental criteria and (b) secondary criteria. This paper pertains mainly to those in the first group. Although geologists once considered that only three or four criteria must be affirmatively answered in order to predict oil occurrence, these have been supplemented from decade to decade, so that no less than eight fundamental criteria are now enumerated, all of which must be answered affirmatively if a district or locality is to be considered favorable for oil. These criteria are discussed in their various aspects and inter-relations. In addition to a discussion of the fundamental criteria, a list of secondary criteria is given with the intention of making it the subject of an independent paper at a later date.

THIS title is made to read "Fundamental Criteria for Oil *Ocurrence*" after due deliberation. So much has been written on the "occurrence," "distribution" and "accumulation" of petroleum deposits that geologists have sometimes confused the respective terms. So far as possible, the use of the word "accumulation" has been avoided here, and, when used, it refers to the *process* of accumulation, whereas "distribution" denotes the *place* of the oil inside a field. "Occurrence," on the contrary, is here used to express the actuality of *existence* of the deposits.

This paper is concerned primarily with proven facts of commercial value, and not with minute or sporadic oil deposifs that may occur in rocks of many ages, structures and various modes of origin. In a consideration of the subject it seems desirable, however, to include certain semi-commercial fields or those of unproven value, for to omit them would be to neglect some of the interesting or important phases of occurrence.

In the past most of the discussions of the oil prospects of a region have been prefaced by a more or less extended outline of conditions considered necessary to oil occurrence. Long ago the essentials were stated as

(a) a porous reservoir to hold the oil;

(b) an impervious cover to prevent its escape and

(c) some form of geologic structure suitable for its concentration in commercial quantity in a pool.

These conditions have generally been considered fundamental and they may still be so considered; but the progress of our science has been so rapid that the previously recognized three fundamental criteria have been added to from decade to decade, and we are no longer satisfied with those once enumerated. Instead, there is an array of fundamental and secondary factors in oil occurrence that was little thought of a few years ago.

The purpose of this paper is to set forth the criteria recognized at this writing, with the hope that discussion and later papers will elaborate the subject. A statement of criteria may tend to counteract the common tendency to overemphasize the importance of structure in connection with any particular province or investigation.

As the paper may be considered a review of the present stage of oil geology, no apology is offered for including in it some factors of an elementary character which are commonly accepted by the profession. The paper does not, however, include methods of work or phenomena of observation. All facilities, instruments and modes of observation or reasoning are, for the purpose of the paper, considered as constituting *methods* of work, rather than *criteria*.

Acknowledgment is here made to all professional colleagues of the writer who have been the source of information or ideas or who have contributed in the past to the progress of oil geology.

Fundamental Criteria

For convenience of discussion, the geologic factors involved in oil occurrence are divided into *fundamental* criteria, or those absolutely necessary in a search for oil in an untested region, and *secondary* criteria, or those which need not be considered but may be important in a final analysis of the situation.

The *fundamental* criteria, which are the subject of this paper, are mentioned in Table 1 in the order of their logical consideration:

Table 1

Fundamental Criteria For Oil Occurrence

1. Do "surface indications" (seepages, etc.), exist?
2. Are the rocks of sedimentary origin?
3. Is the age of the strata (in part at least), similar to that prevailing in some known oil or gas field?
4. Does a possible source of origin exist? If this be not apparent, may it nevertheless be present?
5. Do porous beds or reservoirs exist in which oil may be held in commercial quantity?
6. If so, does sufficient "cover" exist above those beds to prevent oil or gas from escaping to the surface and having been lost?
7. Are the strata so slightly metamorphosed by heat or pressure that the oil has presumably not been driven away?
8. Does geologic "structure" exist suitable for concentrating oil or gas in commercial quantity?
9. Are the hydrostatic conditions such as may not prohibit the accumulation of oil in pools?

Importance of Practical Unanimity

For purposes of this discussion a desirable axiom may be that an oil field cannot be safely predicated on the basis of one or two geologic factors alone, but that the many criteria must be given their proper weight. David White has already shown that "geologists do well to walk humbly and punctiliously to admit that the geologic principles controlling the distribution of oil and gas have as yet been discovered only in part, and that which remains yet to be learned is probably vastly more than what is already known." Therefore, even after due consideration of all known factors, a field cannot be successfully located simply because a majority or nearly all the questions propounded as working hypotheses have been answered affirmatively. At least, a negative answer must not prevail on a locality if oil is to be safely predicted.

Although the writer will not go so far as to assert that drilling ought never to be undertaken in the absence of final affirmative answers to all the fundamental criteria, it seems safe to assert that test wells can be safely drilled if every question be answered favorably. If some criteria be answered favorably and the answer to others be unknown, the venture may still constitute a "good gamble;" nevertheless, as a rule, if all but two criteria be answered negatively, the prospects can be considered unfavorable. In fact, the writer has in mind only one fundamental criterion, namely, presence or absence of genuine oil seepages or "surface indications," that can be answered in the negative and a reasonable prospect still remain of finding oil in commercial quantity. In other words, if the strata be of an age in which oil or gas is elsewhere unknown, or if their character be such that no known source of origin can exist, or if no porous reservoirs appear to exist with an overlying impervious cover, or if local geologic "structure" be nowhere suitable for concentrating oil in commercial quantity—if any of these defects exist—a field is probably not present.

It may be also argued by some persons that the finding of a source of origin is not essential, since geologists differ as to the origin of oil, and this phase of the question of unanimity is discussed in the

[1]Read before the American Association of Petroleum Geologists, Tulsa meeting, March 26, 1927. Printed in the Oil Weekly by courtesy of the Bulletin of the American Association of Petroleum Geologists.

[2]Consulting geologist and petroleum engineer, 50 Church Street, New York City.

portion of this paper entitled "Source of Origin."

Surface Indications

Classification of "surface indications." From a world-wide viewpoint, the commonest evidences of the existence of oil may be "surface indications." Although not most important from a geologic point of view, these are so obvious in some oil-bearing countries that in popular opinion they constitute the principal, and sometimes the only, indication of the presence of oil.

Geologists naturally recognize the fact that "surface indications" are not essential, since many producing fields evince no "surface indications." This may be because the strata are so thick, so unbroken or so impervious that no escape of oil, gas or any naturally derived product has taken place.

The principal so-called "surface indications" are classified as in Table 2, but not all of them are universally accepted by us as true indications.

Table 2

Surface Indications of Oil Occurrence.

(1) Oil seepages or "oil springs."
(2) Natural gas seepages or "gas springs."
(3) Outcrops of sandstones or limestones impregnated with petroleum or bitumen.
(4) Bituminous dikes.
(5) Mud volcanoes.
(6) Burnt clays.
(7) Occurrence of salt water, saliferous beds or massive salt deposits.
(8) Occurrence of sulphur, hydrogen sulphide or gypsum.

Any one of the named "indications" may have some association with oil, but oil may occur at a great distance from the point where the indication reaches the surface. Since a formation from which seepages are seen to emerge may descend at such an angle that the structurally favorable locality lies miles from the exposed outcrop, it is certainly a wrong policy to drill on or near seepages unless evidence exists that the main oil or gas deposit lies directly below the particular point. The relative value of the various "surface indications" are now considered.

1. *Oil seepages or "oil springs."* In 1915 the classification of seepages, or oil springs, stated in Table 3 was proposed by De Golyer[3].

Table 3

Classification of Seepages.

(1) Seepages associated with igneous intrusions.
(a) at contact zones of volcanic plugs and sedimentary rocks,
(b) at contact zones of dikes and sedimentary rocks,
(c) through cracks and fissures in the igneous rock itself,
(d) as intrusions in the igneous rocks, and
(e) from metamorphosed rock above an intrusion which does not outcrop;
2. Seepages not associated with intrusions,
(a) at crest of domes or anticlines,
(b) along marked fault or fissure planes,
(c) from steeply dipping strata, and
(d) isolated occurrences or uncertain relations.

[3]E. De Golyer: Econ. Geol., Vol. X, 1915, p. 654.

Seepages commonly emerge either (1) where the outcrop of an oil-bearing bed or rock reaches the surface, or (2) where a crevice or fault enables oil to rise to the surface. Under the first condition the oil may be manifested as a small film on rivers or lakes, as was true in some Pennsylvania, Ohio and West Virginia fields in the early days of their discovery and as has been noticed by geologists in nearly every country, in some places even where commercial oil does not exist. Small films may come from organic matter buried in Quarternary or earlier deposits as in New Jersey and Georgia, or they may be the manifestation of non-commercial oil contained in sandstones with little shale capping, as in northern Shensi province, China. Hence, if the seepages be of this mild type, the other fundamental criteria must be even more carefully considered than if no seepage be apparent, for a natural tendency seems to exist to place too great stress on any seepage as an argument for oil occurrence. Naturally, it is essential to ascertain whether or not a reported seepage is genuine.

As opposed to minute oil films, oil emerges from the earth in large volume in Mexico, Trinidad, Venezuela, Colombia, New Zealand, Persia, Russia, California and some other countries. In the United States the question is repeatedly asked why seepages so seldom appear in some productive fields, and the answers commonly given are that the beds are so slightly tilted as to have remained unbroken, are so little fissured that oil could not reach the surface. Where productive strata or Carboniferous and earlier ages actually outcrop in a distant locality, the oil may have disappeared from that point owing to metamorphism, erosion, evaporation, or other factors. Obviously, oil of paraffin base less commonly leaves traces on the surface than that of asphalt base.

2. *Natural gas seepages or "gas springs."* In some fields bubbles of gas rise in minute quantities to the surface of stream or lake water. In other parts of the world gas in large quantities has actually been burning for thousands of years. Genuine natural gas springs, while not constituting actual proof of the existence of petroleum, show that conditions are potentially favorable, for, where the gas is found we may expect oil also within the lateral range of the same formations. If the gas be "wet," that is, a carrier of gasoline, the probability of the occurrence of oil in proximity to it is increased, but the importance of having "wet" gas as opposed to "dry" gas as a sub-criterion is sometimes exaggerated. An elementary but necessary factor is of course the distinction between true natural gas and "mash gas," and the distinction, if it is to be of value for purposes of petroleum prediction, must be a critical one.

In addition to the differences in size of seepages and their continuity in time and space, natural gas and "marsh gas" are not generally identical in composition. Pure "marsh gas" is methane (CH^4), such as forms the basis of most natural gases, but "marsh gas" is seldom, if ever, found in this pure form, and, more commonly, it has a composition roughly represented by Sample No. 3 in table 4.

A classification of gases is of interest, and this can be conveniently given by means of Table 4. The presence of ethane (C^2H^6) up to 20 per cent of a gas does not assure us with absolute certainty that an oil field exists in the vicinity, but ethane occurrence is considered a more favorable sign than if the gas is pure methane. The existence of unsaturated hydrocarbons (olefines, etc.), in some gases is decidedly favorable to the existence of oil.

Since so many different types of gas exist throughout the world, it is well to consider true "natural gases" as opposed to those of other kinds. In the following table of representative types of gas, the first two are "*natural* gases," such as are commonly associated with petroleum.

Table 4

Comparative table of different kinds of gases:

3. *Outcrops of sands, sandstones or limestones impregnated with tar or bitumen.* Outcrops of formations impregnated with tar or bitumen are not common, but they exist in some parts of the world. Perhaps the best known evidences of this kind are the "Tar sands" of the Athabasca and other rivers in Northern Alberta. As opposed to these fine examples derived from asphaltic base oils, the outcrop of a paraffin base "oil sand"

Kind of Gas—	*1	*2	*3	*4	*5
Methane (CH_4)	66.90	83.40	76.61	0.17	....
Ethane (C_2H_6)	10.00	10.31	....	....	....
Unsaturated Hydrocarbons	2.25	0.61	....	....	....
Carbon Dioxide (CO_2)	1.05	....	5.36	72.63	1.01
Carbon Monoxide (CO)	....	....	....	....	Nil
Nitrogen	17.05	5.19	18.03	23.91	78.90
Oxygen	2.75	....	....	....	20.09
Hydrogen	....	0.33	....	....	....
Hydrogen sulphide (H_2S)	....	....	....	3.29	....
Helium	....	0.16	....	....	....
Sulphur dioxide (SO_2)	....	....	....	....	....
Totals (per cent)	100.00	100.00	100.00	100.00	100.00

*1. Hylands natural gas springs, Waimata Valley, Cook County, New Zealand, (J. B. Maclaurin: 52nd Ann. Rept., **Dominion Lab. of New Zealand**, 1919, p. 47).

*2. Natural gas from Blackwell oil field, Kay County, Okla., Cady & McFarland, analysts (Jour. Amer. Chem. Soc., Vol. 29, p. 1530).

*3. "Marsh gas" from Marburg Botanical Gardens, Germany (after Maumeme).

*4. Gas from hot mineral spring at Nenndorf, (H. P. Westcott: **Handbook of Natural Gas**, Erie, 1915, p. 105).

*5. Volcanic gas from fumarole in lava stream of 1845, Ireland (Robert Bunsen, analyst).

is in few places visibly petroliferous, because of the oxidation and evaporation which is continually taking place, but the outcrops of asphalt base oils are in many places distinctly bituminous or show a brownish residue. Some compact limestones contain small globules of oil, or if oil be present in the vicinity it can sometimes be detected by the odor after striking the outcrop with a hammer. Testing by the chloroform and laboratory methods frequently gives results.

4. *Bituminous dikes.* The relationship of dikes or asphalt and other bitumens to oil occurrence is not so apparent, since these substances are frequently quite solid. The Albertite Mines of New Brunswick, grahamite dikes of Ritchie Mines, West Virginia, and bituminous dikes of Argentine, Oklahoma and elsewhere are noteworthy examples. Oil may be present in such dikes in the form of "kerogen," yet its presence proves that the conditions are petroliferous.

5. *Mud volcanoes.* The question of whether mud volcanoes constitute an evidence of the existence of oil has been frequently debated, and perhaps has not yet been adequately answered, for the phenomena occur in parts of the world where oil is at present unknown. Mud volcanoes do, however, constitute an evidence of the existence of gas, and this, if it be "wet" natural gas, may lead to inference of an association of oil with it.

6. *Burnt clays.* In a few places in the world beds of clay shale as much as 10 feet thick have been naturally baked at depth by the combustion of bituminous material in or associated with them. Clays are, however, also baked by the combustion of coal and peat beds, so that the cause of burning should be ascertained in any investigation of possible oil occurrence.

7. *Presence of salt water, saliferous beds or massive salt deposits.* Salt is generally associated with oil, either in the form of crystalline masses, salt water, or saliferous strata. Water which accompanies petroleum may be more saline than that normally present in sedimentary rocks. On the other hand, extensive masses of salt and thick beds of saliferous strata exist in many places unassociated with commercial oil, as in Germany, Hungary, Ontario, New York, Kansas and Ohio. Consequently theories for the origin of oil often ignore a relationship with salt as a factor in the process, assuming that brine, where found in an oil field, is a normal constituent of deeply buried formations of marine origin. Perhaps the common idea that salt and oil are necessarily associated is derived in part from the fact that the latter was originally discovered in Pennsylvania and West Virginia during the search for brine, which was at one time obtained from wells in those States. The association of oil with salt domes may be due merely to a concentration of oil against the salt mass as a suitable structure. In West Virginia and in the Clinton sand of Central Ohio, salt water is seldom found associated with oil. Salt is therefore not properly a criterion for oil occurrence, but the known occurrence of salt in association with oil is worthy of more study.

8. *Occurrence of sulphur, hydrogen sulphide or gypsum.* In a few places in Louisiana and Texas oil is associated with sulphur, and gypsum is one of the common minerals pointed to by many persons to prove a relationship between oil and sulphur Some persons have supposed that the occurrence of hydrogen sulphide is favorable to that of petroleum, but there seems to be no probability of such a connection.

Summary. Summarizing the foregoing comments, it must be acknowledged that "surface indications" are not essential to the occurrence of an oil field, since in some fields there is an entire absence of such indications. Where oil seepages or other accepted indications exist, however, they indicate oil below the surface in greater or less quantity. Similarly, since asphaltic deposits are derived from oil, petroleum has once existed in localities where asphaltic deposits exist, and we must determine on the basis of other fundamental criteria whether or not the conditions are such that oil may still be expected in quantity. Where natural gas exists without associated oil, there is no positive evidence of the latter, but since gas and oil are believed to be derived from a common source, we may expect to find evidences of oil somewhere in the same general region.

Sedimentary Rocks as Criteria

It seems unnecessary in a paper designed for this association, to discuss the necessity of finding rock of sedimentary origin before proceeding further in a search for oil. Therefore, this criterion is merely included here for the sake of completeness. It will do no harm to add that, if the surface be composed of extrusive igneous rock having sedimentary beds beneath them, the criteria may be considered as satisfactorily answered. The writer may also remark that dikes do not inherently prevent oil occurrence.

Age of the Strata

Although oil occurs in greater or less quantity in formations of nearly all geologic ages, important fields have been found only in the Ordovician, Silurian, Devonian, Carboniferous, Cretaceous and Tertiary systems, and Tertiary rocks are believed to yield more than 50 per cent of the world's production. Only small deposits of oil have been found in Cambrian strata. Consequently, if the strata be of pre-Cambrian or post-Tertiary age, they may logically be surveyed with suspicion, even if the other fundamental conditions be found satisfactory. Where oil occurs in quantity in post-Tertiary strata it has generally escaped from older beds.

The principal ages of oil-bearing strata are condensed into Table 5, but they are not all commercially proven at the present time.

The writer has been criticised in some quarters for ruling out areas as non-oil-bearing, which are of pre-Cambrian age.

Table 5

Stratigraphic occurrence of oil and gas

Era	System	Country
Cenozoic	Quaternary	United States
	Tertiary	United States, Mexico, Trinidad, Russia, Roumania, Poland, Ukrania, East Indies, Peru, Japan, Italy, Columbia, Venezuela, Persia, Iraq, New Zealand
Mesozoic	Cretaceous	United States, Canada, Mexico, Persia, Iraq, Poland, Ukrania, Columbia, Venezuela, Ecuador, Argentine, New Zealand
	Jurassic	United States, Germany, Argentine
	Triassic	United States
Paleozoic	Carboniferous	United States, Canada, China, England
	Devonian	United States, Canada
	Silurian	United States, Canada
	Ordovician	United States, Canada
	Cambrian	United States, Canada

Such eliminations may not be safe, but they accord with experience and logic.

Source of Origin

A discussion of the pertinance of source of origin hereto is approached with hesitation for several reasons. In the first place, origin involves theoretical considerations which, as such may not be nntirely deserving of inclusion among criteria which are to be accepted as proven facts. In the second place, any discussion of origin is likely to lead into extended controversy which is not the purpose of this paper and which the writer is not prepared to undertake at present.

The inclusion of source of origin among the criteria seems important from one standpoint alone, that if the presence or absence of some recognized possible source in any locality may be considered as constituting a measure of the relative probability of the existence of oil there in contradistinction to other areas. Whether we consider that oil can be of sedimentary, chemical or bio-chemical origin, or, if, on the contrary, we adhere firmly to the organic theory as generally accepted, we must admit that any possible source for oil, even if obscure and doubtful, might constitute a criterian of some degree. Where all evidences of source rocks are absent we can avoid giving weight to the probability of oil as opposed to numberless cases where possible sources of one kind or another have been observed.

Thus we must, as shown by White, consider carefully the "sufficiency of carbonaceous detritus and residues." Since the organic theory is accepted by most

geologists in some form, the pertinence of finding organic remains is axiomatic. We may differ as to the origin or as to what constitutes an organic source, but we need probably hesitate no longer to accept the discovery of an organic source in any prospective field as a favorable criterion. If indications exist that organic matter has once lived in the rocks, they need not be noticeably carbonaceous, petroliferous or organic. Obviously, since oil may have migrated, a source may be near to or far above or below any producing "sand."

A source of origin may not always be provable; nevertheless we should ascertain that conditions do not prohibit the existence of some source. For instance, if the locality consist entirely of non-extrusive igneuous rocks or if the strata be exclusively quartz sandstone from the land surface down to the underlying igneous or metamorphic basement, most of us would accept the evidence as prohibitive to oil occurrence.

Many subsidiary problems arise in connection with the acceptance of the existence of a source of origin, but these need not be discussed here. For instance, an important problem is whether oil has been of marine origin or of fresh water origin or both. Again, at the present stage of our science we need not necessarily exclude oil shales from the category of source rocks, but the definite acceptance of oil shales would be debated by many geologists.

With these few unsatisfactory remarks on the subject of origin, we will pass to the various more positive criteria.

Reservoir Rocks

It is generally conceded that an oil or gas-bearing rock must be porous, though there are some exceptions to this statement. The porous stratum generally consists of sand, sandstone, porous or cavernous limestone, or domolite. Examples of commercial deposits of fluid oil or gas in shale joint cracks, are so limited that they appear to be exceptions and not modifications of the rule, and are not given place in this paper. The presence of oil or gas in limestone may be due to the natural porosity of the rock, to simple solution or to changes consequent to the formation of dolomite. Thus the exact area of occurrence may be limited, not by detailed structure of the porous stratum but by its internal characteristics.

An oil reservoir may terminate by lensing out, by cementing of the "sand," by faulting, by intrusion of igneous rocks or by the sealing action of paraffin or asphalt. Thus, in case of sandstone, the locality of occurrence is due not alone to structure, but also to continuity and porosity of the stratum, and we therefore eliminate a discussion of the *distribution* of oil deposits from the scope of this paper.

In studying an outcrop of sandstone with reference to its probable effectiveness as an oil container, it is important to bear in mind the thickness, per cent porosity and its continuity. The effective porosity is naturally dependent on the size, arrangement and shape of the individual grains and the amount of cementing matter between them. Many of the samples tested at different times for porosity have been derived from outcrops rather than from well cores and may not be fairly representative. They show porosities ranging from 0.108 to 0.519 in granite, 0.53 to 13.36 in limestone and 4.81 to 28.28 per cent in sandstone[4]. They were from actual producing wells and are noteworthy as regards their bearing on what porosities yield oil.

In considering the suitability of a deeply buried sand as an oil reservoir it is well to bear in mind the probable relative area of deep sand pools as opposed to the respective overlying shallows, but this subcriterion may be considered a factor of distribution rather than of occurrence.

In dolomites or cavernous limestones the spaces are generally so irregular that no porosity determination is of value, except where their cavernous nature is supplemented by oolitic or granular structure.

The terms sand, sandstone, sand body, reservoir, pay field and pool are generally loosely used, and care should be taken to avoid confusion. However, the term "sand" is used for the pay stratum so widely that there is probably no chance of general modification in its use.

A complete discussion of porosity should be undertaken from separate viewpoints as pertaining to (a) sands, (b) sandstone, (c) compact limestone, (d) cavernous limestones, (e) dolomites and (f) oolitic beds, but certain statements may be advanced as generally applicable to all those types of strata.

The Cover Rocks

Although the bed of impervious rock immediately overlying an oil "sand" may be termed the "cap rock," this factor, like the porosity variations from place to place in a "sand," is considered as belonging to the subject of *distribution* of oil or gas within a recognized field and not to the broad question of the *possibility* of its occurrence in the area; hence it is not considered a criterion of *occurrence*. The class of cover rocks that would ordinarily be considered suitable for holding a commercial field within a porous "sand" and preventing the escape of oil or gas are thick deposits of shale, clay or compact limestone, generally hundreds or thousands of feet in thickness, and the presence of such deposits in any region may be considered a satisfactory answer to criterion No. 6 (Table 1).

(To be continued)

[4]E. B. Buckley Building and Ornamental Stones of Wisconsin.

Car Rack at Muenster

Wichita Falls, Texas.—Roxana Petroleum Corporation is erecting a five car rack in the Muenster townsite field Cooke County, to ship its crude production to the Roxana Refinery near St. Louis via railroad. The erection of field storage, or tank car shipments was forced on Roxana, since the small pipe line serving about 80 pumpers in the county will not take on new connections.

The Treating of Heavy Oil Field Emulsions

(Continued from page 34)

while the open syphons are shown inclining from the receiving tank and gun barrel.

Picture No. 5 shows the large amount of water being discharged from both syphons. The lines going into the top of the receiving tank are flow lines from the wells. On the larger sizes of plants the oil was pumped directly from the wells to a 750-barrel receiving tank 24 feet high where as much as the free water is drawn off as possible and from the top of this tank the oil flows to an automatic heater.

Just as it leaves the receiving tank the chemical solution is dropped into the stream. In some cases of small production and certain types of oils the ordinary automatic hot water heaters were used; in other plants where more oil was to be treated and indirect heat more suitable, a heater was built which consisted of an enclosed cylindrical tank filled with water in which is placed a series of two-inch coils. The oil to be treated flows through the coils while a gas flame heats the water. On leaving the heater the oil operates a thermostat which controls the gas fuel, thereby keeping the oil at a constant temperature. A safety valve prevents the pressure from building up in the tank should an accident occur to the thermostat or burners. Ordinarily no pressure exists in the water tank as the temperature rarely exceeds 180 degrees Fahrenheit. From the heater the oil flows to the bottom of the excelsior gun barrel and as it rises through the excelsior dehydration takes place. The overflow from the gun barrel is directed into the stock tanks ready for delivery.

Automatic bleeder of the usual open syphon type is placed on the receiving tank and gun barrel to bleed off the free water in the former and the emulsion water in the latter.

The total cost of treating in these plants including labor, chemicals and fuel amounts to $.01175 per barrel on the total of all leases where oil is treated. On the heavy oils this total cost is $.01255 per barrel of oil treated.

Show of Oil Sand in Test At Cypress Heights

Inglewood, Calif.—A slight showing of sand has been found in the California-Eastern Oil Company's Cypress Heights wildcat at a depth between 4212 feet and 4220 feet, according to reports.

This showing can in no way be taken as a saturated oil sand. It may indicate the existence of an oil sand deeper. Drilling is the only method of determining this.

The Johnson well of the Associated Oil Company is drilling and coring slowly ahead, while the Associated's Cypress 1 reported showings in which caused such a flurry of excitement several months ago, continues idle. Cypress, or Potrero, is still an unknown quantity in California oil circles.

Record Producer Connects McElroy And Church & Fields

Area of 13 square miles proven productive by 93 completions, none of which were failures

By H. H. KING
Staff Representative

SAN ANGELO, Texas.—A new record for flush production in the Gulf-McElroy field, Crane County, was established late Sunday night when the Gulf Production Company's J. T. McElroy 12 gauged 235 barrels 33 degree gravity oil per hour during the first four hours from regular lime pay at 2809-40 feet, before being pinched for storage and additional pipe line capacity. This well is among the first completed of the 18 tests drilling in three rows on the dividing line between the Church & Fields area and the McElroy property, and definitely links the two producing areas together, with a combined length of six and one-half miles and two miles in width. Ninety-three completions have been made along this stretch without a single failure.

The big producer brought in by Gulf is located in the northeast corner of section 201, offsetting a strip of excess land about 400 feet in width that is being developed between the Church & Fields and Gulf-McElroy areas by the Landreth Production Corporation. The latter concern has six tests drilling, with Gulf offsetting each on the south, while Carl Cromwell and Frank Pickrell, Simms-Atlantic and Tidal-Turman-Maxwell are drilling north offsets to Landredth's strip tests.

Gulf's McElroy 12 logged the top of the brown lime at 2719 feet and the gray lime at 2756 feet, with surface elevation of 2557 feet. The top of the pay was encountered at 2809 feet, and the well began flowing steadily when 26 feet in the pay, or at 2835 feet. After making 940 barrels during the first four hours the production was pinched to 25 barrels hourly, and Monday afternoon opened to 70 barrels hourly, while additional storage and line capacity was being assembled to permit open flow of the well shortly. Gulf is moving this oil via an eight-inch line to tank farm at Midland, and after June 15 will pump direct to Ranger through a 10-inch trunk line that is now nearing completion. Gulf's McElroy 11, located two locations due east of McElroy 13, responded to a shot of 110 quarts at 2818-2900 feet Sunday night with a flow of 60 barrels per hour. This well logged the lime horizons higher on structure than the nearby big producer, but the porosity of the lime pay figured in the difference in the crude yield, as is often the case in the Church & Fields area.

Big Gain Due

The Church-Fields-McElroy district averaged 37,480 barrels daily from 90 flowing and pumping wells during the past week, and is scheduled to take a substantial gain within the next 10 days, as 20 tests are drilling below 2000 feet in the district, with 21 others following. Humble's six and eight-inch lines and single lines operated by Gulf and the Southern Pipe Line Company are believed to be adequate protection against an over-production, while considerable field storage is available also.

The shooting of producers in the Church & Fields area is becoming more general, and an outstanding example of the results of giving the lime pay a bump is shown by the Eastland Oil Company and Collett-O'Keefe's University 8, which jumped from 1800 barrels daily to 168 barrels per hour after being shot with 90 quarts at 2887-2950 feet. Four days later this well was holding at 4090 barrels daily, giving the 80-acre lease a total production of 8560 barrels Sunday from four wells.

The Yates shallow field, Pecos County, averaged 13,630 barrels daily during the past week, with most of the seven flowing wells in the field partially pinched. Deeper drilling on the Mid-Kansas and Transcontinental's Smith-Taylor 1, which was mentioned last week as having widened the field to the northwest, increased the production to 3580 barrels during the 24-hour period ending Saturday morning from regular pay at 1185-1271 feet. This well was credited with making 175 barrels hourly Sunday. Four other tests on inside locations are being started by Mid-Kansas and Transcontinental.

Upton County

The Prairie-Lane section of the McCamey district, Upton County, registered its first big well during the past week when Gulf's J. F. Lane 1, north offset to the discovery well, gauged 1810 barrels of 27 degree gravity oil natural flow from lime pay at 2005-14 feet. Dixie Oil Company's Burleson 25, a west offset to Gulf's Lane 1, came in early this week flowing 150 barrels during the first 10 hours from top of lime pay at 1950 feet, with a surface elevation of 2515 feet. The Texas Company's Perry 1, located south of the Prairie-Lane 40-acre discovery lease, flowed 130 barrels Sunday from pay at 1965-2037 feet. This well logged the lime at 1872 feet, with a surface elevation of 2315 feet, and is about 20 feet lower than the discovery well. Humble is taking the oil in this area from Prairie and Gulf.

Jones County offered possibilities of a new oil producing area early this week when the E. P. Campbell and Mid - West Exploration Company's wildcat test on the Bud Herndon land, section 6, M. E. P. & P. Ry. survey, bailed live oil from top of pay at 2489 feet. This wildcat is several miles south of Anson.

Geophysical work is being conducted by a number of companies in wildcat sections of West Texas, and one or more crews are now working for Gulf, Humble, Roxana and Southern Crude Oil Purchasing Company (Dixie. The latter company has been applying the seismograph to wildcat acreage between the Hendrick field, Winkler County, and the town of Pyote, Ward County, and also working in Loving and Winkler Counties. Humble has two torsion balance crews working in Garza, Crosby and Dickens Counties, and a third party working south of Pyote, in Ward County.

Kesler New President of Kansas Geologists

Wichita, Kan.—L. W. Kesler, district geologist in Kansas for the Sinclair Oil & Gas Company and head of that company's Kansas offices, has been elected president of the Kansas Geological Society for the coming year. Kesler succeeds Marvin Lee, consulting geologist.

John Reeves of the Empire Gas & Fuel Company was elected to serve as vice president, and John F. Garlough, consulting geologist, was selected as secretary-treasurer.

Marvin Lee, retiring president; W. W. Larsh, Dixie Oil Company, retiring secretary-treasurer; Anthony Folger, Gypsy Oil Company, and F. G. Holl, consulting geologist, were named to serve on the board of directors with the officers.

Sinclair Line Will Provide Outlet for Muenster Production

Two sands in town-lot area has made twin wells necessary; production around 2000 barrels daily

Wichita Falls, Texas.—Sinclair Pipe Line Company is moving in materials to construct an extension from its trunk line system in the Nocona field to the Bulcher and Muenster fields, Cooke County. This line will require about 30 miles of pipe, including 18 miles of six-inch between Nocona and Bulcher, with four-inch pipe to Muenster field.

Cooke County production has outgrown the capacity of the small line being operated by Humble, and a second pipe line outlet was necessary to permit continued development of the five separate fields and pools in the county.

The Muenster field is producing between 1800 and 2000 barrels of crude daily from 20 pumpers in the 1300 and 1600-foot sand horizons. The production in the 1300-foot pay averages 38 degree gravity, while that obtained from the lower pay is about 30 degree gravity. This oil is sold on the Mid-Continent gravity scale of prices. The discovery well was completed in January on the southwest edge of the townsite of Muenster by the Oil Operators Trust's Ben Luke 1, with an initial production of 100 barrels at 1274-82½ feet. The second pay was uncovered by the same concern early in April with an initial production of 350 barrels daily at 1584-94 feet on the M. J. Kleiss 2 after missing the discovery pay.

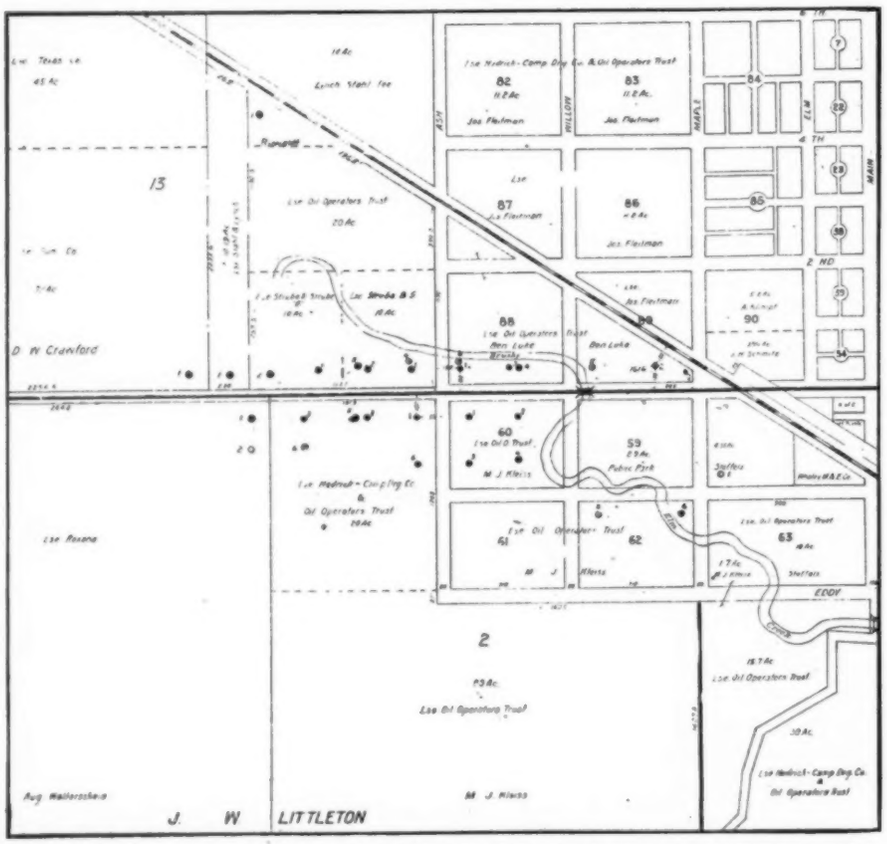
The two producing horizons in the Muenster field has made twin locations necessary on property lines of several of the leases, although the lower pay is furnishing the largest oil producers and the thickest sand horizon. The upper pay has been found to pinch out on several of the leases, with good producers resulting from the 1600-foot pay level. Sufficient gas is obtained from the 1600-foot sand to supply fuel for pumping engines, and occasionally a boiler or two for drilling.

The oil producing limits of the Muenster field have not been defined, although the best wells are being found to the south and southeast of the discovery well. The lone dry hole credited to the field was drilled 1200 feet due east of the Ben Luke discovery well, and abandoned at 1616 feet before the second pay was known. This failure was drilled by the Oil Operators Trust following the completion of the discovery well, but will be carried deeper to try for the lower sand in the near future, while in the meantime a test is being drilled midway between the discovery well and the failure.

The air lift has been used with only fair success in the Muenster field by Stroube & Stroube, veterans of the air lift method in the Corsicana-Powell field, while Lynch-Stahl & Burris also tried this method of lifting the oil on their Koelzer lease. These operators are reported to have found insufficient fluid level to justify the expense of the air, and are putting their wells on the pump. The Oil Operators Trust is building a central power plant to operate its 13 producers in the field.

Roxana recently joined the list of producers in the Muenster field through the completion of a producer on the Walterscheid farm, located on the west side of production. This well pumped 107 barrels during the first 10 hours from 28 feet of broken sand pay at a total depth of 1698 feet. Roxana was unable to obtain a connection on Humble's line, and is erecting a five-car capacity rack to ship its production in tank cars to the Roxana refinery near East St. Louis.

Danciger Oil & Refining Company's wildcat test on the W. A. Harris 80-acre lease, J. Harris survey, A-302, promises to establish a new oil producing area due west of Muenster and near the Montague County line. This well drilled sand pay at 1751-54 feet recently, and when bailed down last week began filling with oil. The hole is being standardized to complete. This test is located in the southwest corner of the east half of the Harris survey, and was originally started by Gist & Graddy.



SHOWING THE DEVELOPMENT TO DATE IN THE MUENSTER TOWNSITE FIELD, COOKE COUNTY, TEXAS, WITH TWIN LOCATIONS BEING DRILLED BECAUSE OF TWO SEPARATE SHALLOW OIL SANDS

Prairie Shipments

Tulsa.—The Prairie Pipe Line Company reports shipments of oil totaling 5,641,514.66 barrels for the month of May (31 days), an average of 181,984.34 barrels per day. Compared with Prairie's figures for April this is a decrease of 900 barrels in the daily average. April shipments (30 days), toaled 5,484,826.20 barrels, or a daily average of 182,827.54 barrels.

Seminole Production Goes to New High Peak

Despite observance of "shut-down" agreement, which is general, output for one day is just under 375,000 barrels

By ROYE MUNSELL
Staff Representative

TULSA.—With the curtailment of production agreement in effect, production in the Seminole district broke all records during the week when the output reached 374,482 barrels during the 24-hour period ending 7 a. m., June 4. This is an increase of 5371 barrels over the previous high 24 hours, which was itself an increase over the preceding 24-hour period.

All of this is not to say, however, that the curtailment agreement, which provides that the production from each 40 acres in the heart of any one of the more or less developed fields shall not exceed 2000 barrels daily, is not working. From all indications the agreement is very much in effect.

In no case, it is reported, has the agreement really been violated. Initial producers on a 40-acre tract are allowed to produce at capacity until the second well on the 40 has been drilled in. This accounts for the apparent excessive production on some of the leases. After the second well has been drilled into pay, it is provided both wells shall be limited to 1000 barrels each daily, or 2000 for the 40 acres if more than two wells are drilled to develop it.

All of this applies only to those areas considered to be inside the present boundaries of the Bowlegs, Earlsboro, Seminole City and Searight fields, which comprise the Seminole district.

From all indications, these areas will be developed with all haste possible, and still stay within the bounds of the production curtailment agreement. Albeit, the operators seem to be going at it in that fashion just now.

Outside Wells Held Back

In order to prevent the opening of any additional areas of large flush production like the present four, it is provided that "outside" wells shall not be drilled into the pay. They may be started and drilled, but they must not develop into producers.

In conformance with this, some 50 "outside" tests are shut down. Altogether there are about 115 such wells in the area affected, which includes 1080 square miles, between and including townships 7 to 11 east and ranges 3 to 7 north.

A report is being made daily by Field Umpire Collins to the Oklahoma State Corporation Commission as to the number of wells shut down and pinched in, and their location.

The Pearson district, in Pottawatomie County, also in the "Seminole area," has a third well, which is making 20 barrels an hour from the Hunton lime picked up at 3780 feet and drilled in 44 feet to the total depth of 3824 feet. The well, the Pure Oil Company's Doyle 1, is a west offset to the Wrightsman-Pierce Petroleum Company discovery for the district. The Pure well is located in the northeast corner of the northwest of 30-7-4e.

The second Pierson Switch well was drilled by the Mid-Continent Petroleum Corporation. It made the Hunton pay a week ago, and is now flowing about 800 barrels daily. The Mid-Continent well, Doyle 1, in the southwest corner of the southeast of the southwest of 19-7-4, is a north offset to the discovery well. It picked up the Hunton at 3798 feet and was drilled to 3817 feet.

There are several other wells in the Pierson Switch district nearing the producing depth. It is probable that if some of the tests do not make producers in the Hunton lime, they will be drilled down and make Wilcox tests.

To date there has only been one set back to the Hunton lime development of the Pierson Switch district. Three miles northwest of the discovery well, in 22-7-3, the Roxana Petroleum Corporation is below 3925 feet with no record of the Hunton lime. The test is drilling in water with a cavey hole.

Outside of the Pearson Switch district the development of the Seminole area was pretty well confined to routine development of the more or less defined fields comprising the area.

Earlsboro

In the Earlsboro field, the most interesting event was the deepening of the second Wilcox sand well in the eastern part and its more than doubled flow. The well is the Magnolia Petroleum Company's Sparks 4, in the southwest quarter of 11-9-5. It was deepened four feet to 4313 feet in the Wilcox sand pay. The result of the deepening was an increase in the flow from 110 to 250 barrels.

Magnolia's Sparks 5, in the southwest of the southwest of 11-9-5, picked up the top of the Wilcox at 4266 feet, and at one foot it produced 500 barrels of oil.

In the extreme western part of the Earlsboro field, the Marland Oil Company and the Philmack Oil Company's Dobbs 1, in the southwest corner of 8-9-5, is making 40 barrels an hour from the Wilcox sand pay at 4320 to 4323 feet. The well is particularly interesting in that it is offset by dry holes.

The Carter Oil Company has a hole full of water in the Wilcox sand in the southwest corner of the southeast of 12-9-5, Earlsboro field, with its Payne 2 test. The Wilcox was topped at 4330 feet, The well is drilling ahead.

Seminole Gets Big Share of Production Tax

Oklahoma City.—Seminole County is far ahead of all other Oklahoma counties in the distribution of the counties one-third share of the gross production tax.

Of the $721,126.16 apportioned to the counties from the May collections by Auditor A. S. J. Shaw, Seminole County gets $267,639.35. Osage County is next with $105,857.78 as its share. There is no other county that got as much as $100.000. The others ranked as follows:

Kay	$80,246.39
Creek	57,691.40
Carter	41,151.43
Hughes	36,410.85
Pottawatomie	15,510.28
Okmulgee	14,768.89
Garfield	11,850.81
Okfuskee	11,707.73
Pawnee	11,701.95
Noble	11,421.87
Payne	10,132.18

Twenty-four other counties received oil funds in varying amounts. At the bottom of the list was Marshall with $2.49 as its share. Half of the money retained by the counties goes into the school fund, half to highways.

New Lucey Distributor

Wichita, Kan.—The Lucey Manufacturing Corporation, with headquarters at Chattanooga, Tenn., announces the appointment of the Bridgeport Machine Company here, as its distributor in this territory.

Seminole District Production

Pipe Line Taxing Production Shown in Parenthesis

SEMINOLE DISTRICT PRODUCTION

Company, Lease, Location & Disposition of Oil	No. Wells	Pro. duction
Amerada Pet. Corp.—		
Fixico, 23-9-6 (Tex, Oz)*	4	1,965
Killingsworth, 23-9-6 (PPL, Tex, Shaf)	4	536
Rentie, 23-9-6 (PPL, Tex)	4	1,561
Amerada Total	12	4,062
Atlantic Oil Prod. Co.—		
N. Cudjo, 35-9-6 (Mag, PPL)	4	400
J. Cudjo, 35-9-6	1	30
Atlantic Total	5	430
Barnsdall Oil Corp.—		
Carter, 24-9-6 (Barn, SPL, Cons.)	9	5,538
Jones, 34-9-6 (Barn, SPL)	4	2,750
Barnsdall Total	13	8,288
Carter Oil Co.—		
B. Carter, 24-9-6 (OPL)	2	215
F. Carter, 23-9-6 (OPL)	3	635
J. Carter, 24-9-6 (OPL)	4	115
R. Cudjo, 35-9-6 (OPL)	3	1,320
W. Cudjo, 34-9-6 (OPL)	1	546
Gilliland, 27-9-6 (OPL)	1	590
Grisso, 23-9-6 (OPL)	7	1,320
G. Killing, 14-9-6 (OPL)	3	1,810
M. Killing, 23-9-6 (OPL)	9	16,567
F. Knapp, 13-9-6 (OPL)	3	1,497
Lukes, 27-9-6 (OPL)	5	3,770
Simpson, 35-9-6 (OPL)	2	640
Strothers, 34-9-6 (OPL)	2	5,590
Vierson, 23-9-6 (OPL)	4	1,545
Carter Total	49	36,160
Empire Company—		
Gross, 25-9-6 (OPL)	2	797
Wilson, 34-9-6 (Sinc, Emp)	3	1,646
Empire Total	5	2,443
Gypsy Oil Co.—		
Butler, 35-9-6 (Gulf)	3	1,241
Carter, 24-9-6 (Gulf)	8	2,537
T. Cudjo, 34-9-6	1	....
Fixico, 26-9-6 (Gulf)	8	245
Harjo, 25-9-6 (Gulf)	2	1,077
Wolfe, 26-9-6 (Gulf)	6	1,910
Gypsy Total	28	7,010
Independent Oil & Gas Co.—		
P. Fixico, 23-9-6 (Indep, OPL)	3	345
Harjo, 25-9-6	1	....
Independent Total	4	345
Independent-R. F. Garland—		
T. Fixico, 26-9-6 (Indep, OPL)	8	1,524
Independent-Garland Total	8	1,524
Independent-Inter-Ocean—		
Jones, 25-9-6 (Indep, OPL, Tk Car)	4	690
Independent-Inter-Ocean Total	4	690
Indian Territory Ill. Oil Co.—		
Bowlegs, 26-9-6 (OPL, PPL, Oz)	10	4,478
Goodin, 23-9-6 (Cosden)	4	376
Harjo, 23-9-6 (Cosden)	4	898
James, 24-9-6 (Cosden, PPL, Stge)	4	1,060
Marcy, 13-9-6	1	....
Reed, 24-9-6	3	....
I. T. I. O. Total	26	7,312
Kingwood Oil Co.—		
Harjo, 22-9-6 (Oz)	5	2,856
Kingwood Total	5	2,856
Magnolia Pet. Co.—		
Franks, 25-9-6 (Mag)	3	1,752
Magnolia Total	3	1,752
Mid-Continent Pet. Co.—		
Rentie, 14-9-6 (Cosden, Tex)	9	2,215
Tayoche, 24-9-6 (Cosden)	7	695
Mid-Continent Total	16	2,910
Mid-Kansas Oil & Gas Co.—		
Presley, 3-8-6 (new)	1	25
Wilkins, 25-9-6 (PPL)	1	785
Mid-Kansas Total	2	810
Phillips Pet. Co.—		
Strothers, 27-9-6 (PPL)	3	1,262
Phillips Total	3	1,262
McCullough—		
Butler, 35-9-6 (Sinc, Tex)	2	1,385
McCullough Total	2	1,385
Pure Oil Co.—		
Strothers, 26-9-6, (Tk Cars)	16	5,028
Strothers "B" 36-9-6 (PPL)	3	5,674
Pure Total	19	10,702
Prairie Oil & Gas Co.—		
Gross, 25-9-6 (PPL)	5	30
Mason, 36-9-6 (PPL)	1	1,448
Spencer, 13-9-6	1	....
Strothers, 27-9-6 (PPL)	7	2,875
Prairie Total	14	4,353
Roxana Pet. Corp.—		
Harber, 22-9-6 (Oz)	2	727
Lasley, 22-9-6 (Oz)	2	298
Roxana Total	4	1,025
Sinclair Oil & Gas Co.—		
Carterm, 13-9-6, (Sinc)	2	40
Cudjo, "A", 35-9-6 (Sinc)	6	1,280
Cudjo "B", 35-9-6 (Sinc)	3	960
Grisso, 22-9-6 (Sinc)	1	790
Fixico, 23-9-6 (Sinc)	4	1,115
Sinclair Total	16	4,185
T. B. Slick—		
Born, 35-9-6	1	....
Cudjo, 35-9-6 (Tex)	3	1,500
Franks, 35-9-6 (Mag, Stge)	7	2,417
Giblet, 35-9-6 (Mag)	1	1,561
Slick Total	12	5,478
Superior Oil Corp.—		
Cudjo, 35-9-6 (OPL, Stge)	4	2,243
Noble, 15-9-6 (OPL)	1	6
Superior Total	5	2,249
Texas Co.—		
Mayhue, 14-9-6 (Tex)	1	25
Texas Co. Total	1	25
Tidal-Osage Oil Co.—		
Carter, 24-9-6 (PPL, Oz)	6	2,595
Fixico, 26-9-6 (PPL, Tidal)	7	1,070
Harjo, 23-9-6 (Tidal)	7	125
Mahardy, 24-9-6 (Oz)	5	1,125
Noble, 15-9-6	1	....
Tayoche, 25-9-6 (PPL, Tidal)	2	2,730
Tidal Total	28	8,245
Turman Oil Co.—		
Cudjo, 35-9-6 (Oz, PPL, Tex)	4	1,443
Grisso, 35-9-6 (Tex)	1	597
Jones, 34-9-6 (Sinc, Tex, Oz)	4	5,240
Turman Total	9	7,280
Seminole City Field Total	293	122,781

SEARIGHT FIELD

Company, Lease, Location & Disposition of Oil	No. Wells	Pro. duction
Carter Oil Co.—		
Davis, 4-9-6 (OPL)	5	7,460
Frazier, 3-9-6 (OPL)	4	9,065
Kiker, 2-9-6 (OPL)	1	35
Scott, 26-10-6 (OPL)	1	40
Stewart, 34-10-6	1	....
Carter Total	12	16,620
Gypsy Oil Co.—		
Cudjo, 4-9-6 (Gulf)	1	682
Gypsy Total	1	682
Mid-Continent Pet. Corp.—		
Davis, 33-10-6 (Cosden)	1	35
Grayson, 34-10-6 (Cosden, Tex)	5	7,015
Mid-Continent Total	6	7,050
Prairie Oil & Gas Co.—		
Cannon, 33-10-6 (PPL)	1	20
Carter, 10-9-6 (PPL)	1	20
Houck, 33-10-6 (PPL)	1	15
Kinkade, 33-10-6 (PPL)	7	5,580
Weimer, 22-10-6	1	....
Prairie Total	11	5,635
Pure Oil Co.—		
Aldridge, 3-9-6 (PPL)	1	866
Pure Total	1	866
Roxana Pet. Corp.—		
Strothers, 3-9-6 (Oz)	1	296
Roxana Total	1	296
F. J. Searight—		
Youngblood, 33-10-6	3	....
Searight Total	3	....
Sinclair Oil & Gas Co.—		
Polly, 3-9-6 (Sinc)	2	1,125
Sinclair Total	2	1,125
Twin State Oil Co.—		
Jeming, 4-9-6 (Tk Car)	1	865
Twin State Total	1	865
H. F. Wilcox Oil & Gas Co.—		
Cluck, 4-9-6 (Sinc)	2	2,108
Wilcox Total	2	2,108
Searight Field Total	40	35,247

BOWLEGS FIELD

Company, Lease, Location & Disposition of Oil	No. Wells	Pro. duction
Amerada Pet. Corp.—		
Rascoe, 15-8-6 (Mar, Amer, Oz, PPL Sinc)	8	11,590
Amerada Total	8	11,590
Atlantic Oil Prod. Co.—		
Baker, 10-8-6 (Mag)	2	3,310
Fleet, 23-8-6 (Mag)	1	4,008
Jones, 16-8-6 (PPL)	2	1,015
Atlantic Total	5	8,333
Barnsdall Corp.—		
McNac, 28-8-6 (Barns)	1	60
Murrow, 11-8-6 (Barns)	1	671
Barnsdall Total	2	731
Carter Oil Co.—		
Bowlegs, 15-8-6 (OPL)	1	3,235
Harjocke, 14-8-6 (OPL)	4	5,195
Walker, 15-8-6 (OPL)	1	3,695
Wise, 23-8-6 (OPL)	4	9,455
Carter Total	10	21,580

(Continued on page 44)

*(Note) Oz—Ozark Pipe Line Co.; PPL—Prairie Pipe Line: SPL—Sinclair Pipe Line; Emp—Empire Pipe Line; Barns—Barnsdall Pipe Line; Shaf—Shaffer Pipe Line; Mag—Magnolia Pipe Line; Tex—Texas Company Pipe Line; OPL—Oklahoma Pipe Line; Stge—Storage; Tk Cars—Tank Cars.

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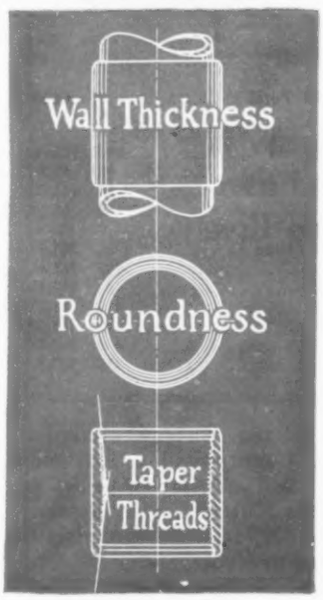

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In order to make Smithsteel Couplings readily available in quantities to oil producing companies, machine shops and supply companies, the A. O. Smith Corporation has established complete factory stocks in the field.

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Say you saw it in The OIL WEEKLY

(Seminole production continued)

Company, Lease, Location & Disposition of Oil	No. Wells	Pro. duction
Empire Company—		
Lacey, 14-8-6 (Emp)	4	5,736
Empire Total	4	5,736
Gypsy Oil Co.—		
Brown, 33-8-6 (Gulf)	1	80
Walker, 15-8-6 (Gulf)	5	5,262
Seminole, 5-8-6	1	....
Gypsy Total	7	5,342
Indian Territory Ill. Oil Co.—		
Davis, 13-8-6 (Tk Car, Stge)	2	3,895
Goforth, 15-8-6 (PPL, Stge)	6	11,573
Livingstone, 15-8-6 (PPL, Stge)	7	16,203
Walker, 15-8-6 (Emp)	5	7,814
Wilmouth, 15-8-6 (Stge)	3	2,480
Youngblood, 24-8-6 (Stge, Tk Cars)	2	4,003
I. T. I. O. Total	25	45,968
McCullough—		
Bowlegs, 22-8-6 (Sinc)	1	265
McCullough Total	1	265
Mid-Continent Pet. Corp.—		
Taylor, 10-8-6 (Cosden, Oz)	2	1,976
Hutka, 24-8-6 (Cosden)	1	1,050
Mid-Continent Total	3	3,026
Minnehoma Oil Co.—		
Bowlegs, 15-8-6 (PPL)	1	716
Minnehoma Total	1	716
Prairie Oil & Gas Co.—		
Gahagan, 23-9-6 (PPL)	1	3,300
Haber, 10-8-6 (PPL)	3	4,455
Whitney, 23-8-6 (PPL)	2	325
Prairie Total	6	8,080
Pure Oil Co.—		
Reed, 14-8-6 (Pure)	9	11,906
Pure Total	9	11,906
Roxana Pet. Corp.—		
Taylor, 16-8-6 (Oz)	4	1,274
Roxana Total	4	1,274
Sinclair Oil & Gas Co.—		
Adam, 22-8-6 (Sinc)	1	40
Bowlegs, 22-8-6 (Sinc)	1	400
Ellen, 11-8-6 (Sinc)	1	610
Harjo, 14-8-6 (Sinc)	3	4,035
C. Jones, 9-8-6 (Sinc)	1	850
Taylor, 10-8-6 (Sinc)	1	675
Walker, 22-8-6 (Sinc)	2	2,660
Sinclair Total	10	9,270
The Texas Co.—		
Harjoche, 10-8-6 (Tidal)	1	1,908
Texas Co. Total	1	1,908
Bowlegs Field Total	**98**	**142,520**

EARLSBORO FIELD

Amerada Pet. Corp.—		
Anderson, 15-9-5 (Sinc, PPL,, Mar)	3	1,044
Cowden, 4-9-5 (Sinc, PPL, Oz)	1	4,607
Amerada Total	4	11,651
Barnsdall Corp.—		
Bruner, 2-9-5 (new well)	1	10
Cudjo, 14-9-5 (Barns)	1	30
J. Davis, 11-9-5 (Barns)	2	222
M. Davis, 11-9-5 (Barns, Mag)	1	231
Harjo, 10-9-5 (Barns)	1	119
Pack, 10-9-5 (Barns)	1	363
Sango, 1-9-5 (Mag, Barns)	1	174
Sebolka, 15-9-5 (Stge)	1	5,362
D. Smith, 15-9-5 (Barns)	2	520
Sullivan, 10-9-5 (Barns)	1	21
Barnsdall Total	13	7,385
J. E. Crosbie—		
Bryant, 9-9-5 (Sinc, Tex)	1	4,409
Crosbie Total	1	4,409
Gypsy Oil Co.—		
Boro, 16-9-5	1	....
Earl, 16-9-5	2	....
D. Smith, 15-9-5	1	....
Strain, 17-9-5	1	....
B. Carter, 11-9-5 (Gulf)	2	387
McFarland, 9-9-5 (Gulf)	2	1,500
State, 16-9-5 (Gulf)	4	6,669
Gypsy Total	16	11,751
Independent Oil & Gas Co.—		
Bruner, 10-9-5 (PPL)	4	188
Independent Total	4	188
Independent & Darby—		
Knapp, 8-9-5 (Indep)	1	2,074
Independent-Darby Total	1	2,074
Mid-Continent Pet. Corp.—		
McKinley, 9-9-5 (Cosden, Oz)	2	3,980
Mid-Continent Total	2	3,980
Magnolia Pet. Co.—		
Bryant, 9-9-5 (Mag)	2	6,955
Holmsley, 11-9-5 (Mag)	1	6,741
Ingram, 10-9-5 (Mag)	1	57
Lena, 10-9-5 (Mag)	3	307
Seay, 12-9-5 (Mag)	1	35
Simpson, 10-9-5 (Mag)	3	487
Sparks, 11-9-5 (Mag)	5	5,364
Magnolia Total	16	19,946
Phillips Pet. Co.—		
Gram, 9-9-5 (PPL)	3	1,785
Phillips Total	3	1,785
Philmack & Marland—		
Dobbs, 8-9-5 (Mar, Stge)	2	1,339
Philmack-Marland Total	2	1,339
Prairie Oil & Gas Co.—		
Baker, 24-9-5 (PPL)	1	260
Stidham, 11-9-5	1	....
Prairie Total	2	280
Sinclair Oil & Gas Co.—		
Foreman, 18-9-5	1	....
Sinclair Total	1	....
The Texas Co.—		
Ingram, 10-9-5 (PPL)	1	35
Wilmott, 10-9-5 (PPL, Tex)	4	400
Texas Co. Total	5	435
Earlsboro Field Total	**70**	**65,203**

SUMMARY

Seminole City field	293	122,781
Searight field	40	35,247
Bowlegs field	98	142,520
Earlsboro field	70	65,203
Grand Total (June 3)	501	365,751
June 2	497	365,433
June 1	495	351,357
May 31	492	353,154
May 30	490	363,329
May 29	485	347,280
May 28	479	350,575

One Big Producer Boosts Panhandle Output

Amarillo, Texas.—One producer was largely responsible for the new gain in the Texas Panhandle's output over the past week. This unusual well is the Cockrell-McIlroy Oil Company's Cockrell 1, located in the southeastern part of Hutchinson County, and is credited with having averaged 11,100 barrels daily for the week, representing an increase of 6000 barrels above the average for the previous week. An open flow test of this well has been delayed since its completion April 19 because of limited room in Humble and Marland's lines, while relief was had by the completion of a six-inch line to steel tankage near Borger. The performance of this well shatters all previous production records in the district, and it is only several feet in the lime pay at 2850 feet.

The McIlroy Oil Company's Cockrell 2, located near the above big producer, was also opened up during the past week and averaged about 8000 barrels daily. This well caught fire May 29 while flowing above 100 barrels hourly, and was extinguished four days later with a shot of nitro.

Efforts to widen the flush area on the Cockrell ranch to the east and south of the two big wells are proving disappointing. Herrogan Oil Company's two wells on the Cockrell land have yielded only small producers after heavy shots in the lime pay at 3000 feet, while the Mudge Oil Company's Cockrell 2 proved disappointing after two shots. The First National Oil Company's Cockrell 1, located a half mile southeast of production, is swabbing 100 barrels and little water daily from lime pay at 2993 to 3081 feet, with a surface elevation of 3090 feet.

L. W. Timms et al of Kansas City were seeking a pipe line connection early this week to complete their Lewis 1, located in the Badger section of Hutchinson County and a half mile from production. This well drilled 48 feet of pay to 3001 feet, with a surface elevation of 3095 feet, and promises to make a good producer.

The loss of 10 lives among members of drilling and casing crews of two burning wells in Hutchinson County within the past two weeks has resulted in more drastic steps being taken to avoid such accidents in the future. Casing crew men held meetings at Borger during the week to organize and insist on the operators enforcing safety measures when tests are drilling through the big gas horizon. The Paramount-Sanford section of Hutchinson County offers a greater hazard than other sections of the field because of the heavy gas production above the oil pay. The land owners in this area have also protested the waste of gas that takes place in drilling to the oil pay.

An Oil Producer Writes—

From an official of one of the major producing companies comes the following unsolicited letter:

"Perhaps it is not out of place for me to here acknowledge my appreciation of the many technical papers appearing in THE OIL WEEKLY, *from time to time. In my humble opinion, Mr. Dudley and his group of able associates have achieved a degree of editorial and news stability seldom, if ever, attained by any trade publication."*

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East Texas Gas Pipe Line to Houston Rumored

Houston.—Rumors of another long gas line to be built into Houston, probably from the Waskom district, are concurrent with the announcement that O. R. Seagraves, president of the Houston Gulf Gas Company, has purchased 1500 acres of gas land in the Waskom field. The purchase also includes land in Caddo Parish, Louisiana, since the field extends across the Texas line.

The transaction is said to involve $450,000 and includes seven producing gas wells. Under terms of the contract, the State Line Oil & Gas Company, from whom the purchase was made, must drill wells necessary to give a total production of 75,000,000 feet of gas daily.

Houston to Vote in Gas Franchise Tangle

Houston.—The increased gas rate of 80-75 cents established several weeks ago has been eliminated by the city council and the old rate of 65-50 cents has been restored. Gas is furnished to Houston by the Houston Gas and Fuel Company which buys its supply from the Houston Gulf Gas Company, which operates a gas line from the source of supply in Live Oak County, Texas.

The city council has announced that it will give the people a chance to vote on whether or not a franchise shall be granted to the Houston Natural Gas Company to do business in the city. The Houston Natural Gas Company is controlled by the Houston Pipe Line Company of which E. H. Buckner is president.

Southwest Gas Company in Houston

Houston.—With the recent incorporation of the Southwest Gas Company and the securing of a permit to do business in Texas, with headquarters here, Houston becomes the home of another major gas concern. The company is capitalized at $3,000,000.

The company was organized under the laws of Delaware, and is to supply directly and through subsidiaries, natural gas to a number of cities and towns located in the central part of Texas and Oklahoma. The company will also serve large industrial and public utility users under contracts. Consumption of the consolidated properties has been estimated to be 21,-825,000 cubic feet daily.

Long term contracts are in effect with the Oklahoma Gas and Electric Company, Central Power and Light Company, Oklahoma Portland Cement Company, and others. The company is to operate in the following towns: Dublin, Stephenville, Comanche, De Leon, Rising Star, Cross Plains, Pioneer, Cuero, Yoakum and Gonzales, in Texas, and Ada, Okla., has contracted for the franchises and gas distribution systems of Seminole and Earlsboro, in Oklahoma.

Distributing facilities of the company aggregate over 300 miles. Contracts have been secured with large producers in the respective gas fields for requirements. The supply for the Ada district is obtained from the American Oil and Refining Company, and from the Independent Oil and Gas Company. Gas for the Cuero-Yoakum-Gonzales division is obtained under long term contract from the Houston Gulf Gas Company.

The company represents a consolidation of a number of gas distributing systems, including the MacThwaite Oil and Gas Company, the Pontotoc Pipe Line Company, the DeLeon Gas Company, Tri-Cities Gas Company, and a few others.

The main source of supply will be Southwest Texas, the Cross Plains, Pioneer and Rising Star area, and the Seminole district, Oklahoma.

The board of directors consists of the following: J. W. Colvin, president; L. C. Doney, Jr., vice president; O. R. Seagraves, C. O. Moore, Paul Kayser, R. H. Baker, George E. Colvin, B. B. Burton, F. T. Sutton and Horace Gade.

Messrs. Sanderson & Porter, engineers, New York, will act as consulting engineers for the company.

About 25,000,000 cubic feet of gas is being delivered to the different cities and industries now served. The population of the territory which will be included in an expansion program now under way is about 200,000.

Doheny Brief Claims Fall Could Not Be Bribed

Washington, D. C.—Declaring that, as President Harding's executive order transferring control of naval oil reserves from the Navy Department to the Interior Department was invalid, former Secretary of the Interior Fall had no legal authority to dispose of them, and, therefore, could not be bribed in connection with the leasing thereof, counsel for Edward L. Doheny and Edward L. Doheny, Jr., last week urged the dismissal of the government's bribery case in a brief filed with the court of appeals of the District of Columbia.

Citing a decision by the court in another case, counsel for the Doheny's pointed out that it had been held that unless a duty was imposed upon an official by law there can be no bribery and declared that decision should be binding in the present case. Special counsel for the government, it was declared, have stated that the executive order was not legal authority and of no force or virtue and was known so to be by Fall and Doheny.

Searight Receiver Named

Tulsa.—Federal Judge Williams of the Eastern District of Oklahoma has appointed George C. Pendleton, of Durant, Oklahoma, receiver for the oil properties and operations of F. J. Searight of Tulsa.

Mr. Searight, it will be recalled, is the man who opened the Searight field in the Seminole district. It is reported that at one time he was offered $3,500,000 for his lease at Seminole, and refused. Now the production on the lease has dropped to the point where it is virtually nothing.

Hillside Holding Sold

Muskogee.—The Dhuse-Wishman oil & Gas Company, with headquarters here, has been formed to operate the properties of the Hillside Oil, Gas & Coal Company. The Dhuse-Wishman Company, composed of Herman Duhse of Yorkville, Illinois, and W. C. Wishman of Chicago, acquired by purchase the properties of the Hillside company at a court sale for $20,000.

The properties consist of the Jim Bradley lease in 8-14-18, the Cravens lease in 4-15-15 and the Spotts lease in 28-15-15, a total of 300 acres. There are 14 small producers on the leases.

Abandon Third Test at Palos Verdes

Los Angeles, Calif.,—Preparations are being made to shut down the third wildcat well at Palos Verdes of the Petroleum Securities Company, it is reported.

It is generally conceded that the Palos Verdes Fault region has been given a thorough test by the Petroleum Securities Company, and it is not unlikely that this producing organization will abandon its leases in the region following the showing made by the latest wildcat.

Los Angeles Shipments

Los Angeles, Calif.—Shipments of petroleum exports from Los Angeles Harbor during the two week period ending May 28 totaled 5,090,050 barrels. Of this amount 2,469,610 barrels were shipped during the last week of the two week period.

This latter amount was divided as follows:

To Atlantic Seaboard..999,060 barrels
To Atlantic Foreign....600,568 barrels
To Pacific Domestic....651,675 barrels
To Pacific Foreign.....218,307 barrels

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Approximately 74,712 joints, some plain ends, but thousands with threads and couplings, multiply chances for error or slip-ups in inspection, but every joint was La Belle and proved O.K.

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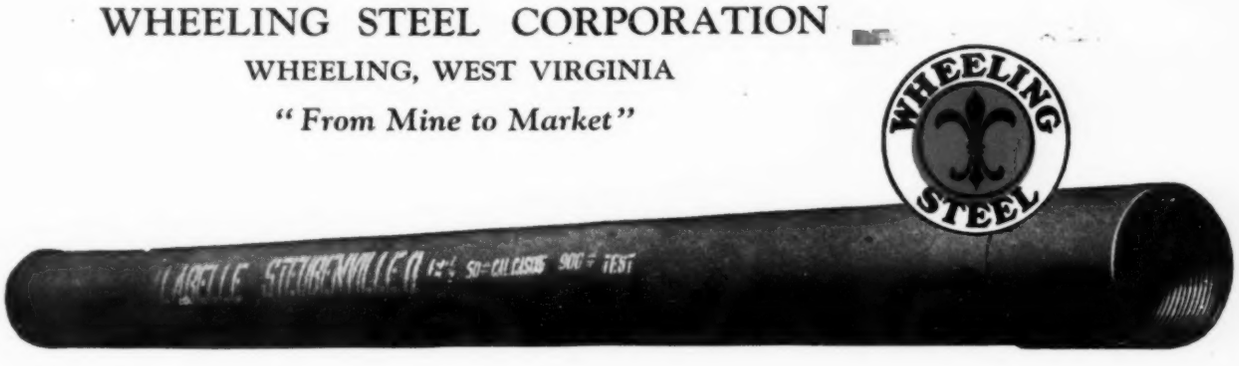

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Rocky Mountain Development Notes

Ralph Arnold Optimistic About Mountain Area

Denver, Colo.—Ralph Arnold, internationally known geologist and petroleus engineer, formerly partner of Herbert Hoover, Secretary of Commerce, and three times associated with the federal government in different capacities has established offices for the summer in Denver and has let it be known that he is endeavoring with some associates to work out a plan for cooperative development in the Rocky Mountain district which will give to the geologist, the lease man, the attorney, and all interested in the development of new territory a chance to work with minimum expense, maximum efficiency, and on a conservative basis in the finding and development of new fields. This plan is said to be an outgrowth of another plan for the self-preservation of those who work at woefully underpaid compensation contributes extensively to the progress of the industry.

Mr. Arnold says that he has concluded that the oil industry has to have outside help in the solution of its problems, that he believes that present over-production is due to improved methods, but that he believes firmly in intensive wildcat operations at all times to insure reserves for the future. He states that all conservative mining companies follow this last plan and develop their reserves only when they are needed instead of throwing the over-production on the market as the oil producers are doing at present.

Mr. Arnold is optimistic about the outlook for the Rocky Mountain distrist and states that Denver is destined to become more and more the center of the great intermountain oil territory and that southeastern Colorado is one of the most interesting prospective fields in America.

Mrs. Verner Z. Reed, wife of the late Verner Z. Reed, pioneer operator of the Salt Creek field and one of the organizers of the Midwest Refining Co., has given $673,000 to the Denver Foundation.

Summary of Rocky Mountain Drilling Operations

May, 1927

Districts—	Rigs	Drilling	Comp.	Dry	Prod.
WYOMING					
Big Muddy	2	3	1	0	50
Big Horn Basin	3	15	3	2	500
Carbon County	4	10	3	1	*250
Elk Basin	1	2	1	0	30
Fremont County	3	11	3	2	200
Grass Creek	1	2	0	0	00
Natrona County	3	3	1	1	00
Lance Creek	1	1	0	0	00
Osage	2	6	6	2	70
Rock River	1	2	1	1	00
Salt Creek	6	25	25	2	43,400
Southwestern Wyoming	10	26	8	3	600
Miscellaneus	8	42	6	6	00
Totals in Period	45	148	58	20	45.100
Totals Last Period	53	148	36	9	28,200
Difference	8	0	22	11	16,900
*One gas well.					
MONTANA					
Kevin-Sunburst	22	25	16	7	1,225
Cat Creek	2	2	1	1	60
Miscellaneous	18	27	6	5	Gas
Totals in Period	42	54	23	13	1,285
Totals Last Period	54	56	20	10	1,420
Difference	12	2	3	3	135
OTHER STATES					
North Dakota	2	3	1	1	00
South Dakota	2	3	1	1	00
Western Nebraska	1	2	1	1	00
Western Kansas	8	22	10	4	800
Nevada	2	1	0	0	00
Utah	9	19	3	3	00
Colorado	13	39	9	5	1,000
Arizona	4	7	2	2	00
New Mexico	12	40	10	4	750
Totals in Period	53	136	37	21	2,550
Totals Last Period	58	142	31	12	2,025
Difference	5	6	6	9	525
RECAPITULATION					
Wyoming	45	148	58	20	45,100
Montana	42	54	23	13	1,285
Other States	53	136	37	21	2,550
Totals in Period	140	338	118	54	48,935
Totals Last Period	165	346	87	31	36,320
Difference	25	8	31	23	12,615

Rebuild Refinery Plant at Parco, Wyoming

Parco, Wyoming. — Following a meeting last week at Kansas City of officials of the Producers and Refiners Corporation and the Universal Oil Products Company, announcment has been made that the cracking plant here will be rebuilt. Cost of the new units will run around $800,000.

The Parco Plant of the Producers and Refiners Corporation was damaged to the extent of $750,000.00 as a result of fire following an explosion in the cracking units early in April.

Ask Permit for Gas Line to Serve Denver

Denver, Colo.—Northeastern Colorado Oil Company has applied to the State public utilities commission for a permit to build a pipe line for gas from its well in Willard Dome in Logan County, northeastern Colorado, to Denver and intermediate towns. Action is taken for the purpose of protecting the company in the event gas is encountered. Total depth is now reported below 3390 feet. Empire Gas & Fuel Company is said to have an interest in the test.

Fishing Job in Teapot Dome Producer

Casper, Wyo. — Margalexom Oil Company, operating 200 feet east of the Teapot Dome Naval Reserve line, has dropped pipe 15 feet in its test, ne ¼ quarter section 11-38-78, and is now fishing to recover it. Total depth is 3040 feet. Well flows by heads once or twice each week, making from 12 to 15 barrels at each flow. On several swabbing tests it has made from 50 to 60 barrels, and from these tests the company has some 1000 barrels of crude in storage. If the company is unable to recover the pipe and drill deeper, an effort will be made to produce the well at the present depth and drill another hole nearby.

Weather Stops Operations

Shelby, Mont. — Adverse weather conditions have been responsible for the continued suspension of operations, and the difficulties with which operators are contending in the Kevin-Sunburst field. Extremely cold weather early in the year made all operations impossible for a time, and during the last month heavy rains have flooded the field and made the roads impassable. The entire field is a sea of mud.

Cold *or* Hot—Wet *or* Dry

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There is no doubt that paint does not meet more rigid demands, or confront more severe conditions, than it does in the oil and gas industries.

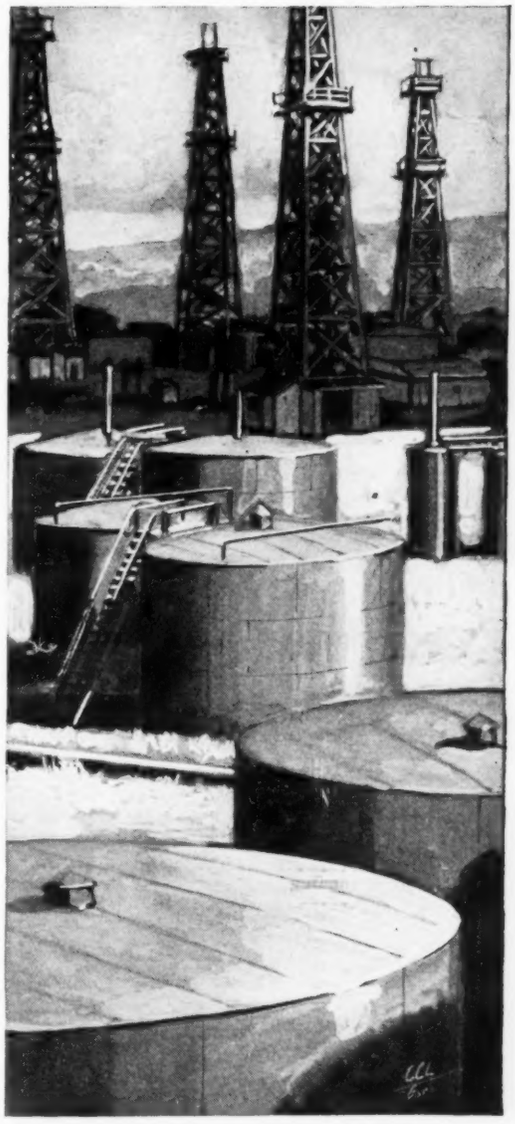
It is for this kind of work that Arco paints and protective products are particularly suitable.

Arco Metal Paints, for example, provide a permanent, rust-resisting finish for storage tanks, tank cars and auto truck tanks.

Arco Pipecote is a heavy, thick-bodied paint. It forms a blanket of protection on pipe lines and resists moisture, alkalis and acids for a good many years without recoating.

These are only two . . . from a list of hundreds. Each paint is for one job, and it does that one job to perfection.

Our technical department . . . backed by 46 years of outstanding laboratory and manufacturing experience . . . is prepared to help you at all times. No matter how complicated your problems . . . we can solve them for you. *Write us today.*



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(E2)

ARCO

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Say you saw it in The OIL WEEKLY

Gulf Building Six Tanks at Lufkin, Texas

Houston.—Six 80,000 barrel steel tanks have been purchased by the Gulf Pipe Line Company for immediate erection at its Lufkin station in Southeast Texas, where crude lines from Arkansas, Louisiana and the Mexia-Corsicana fields tie into the Mid-Continent trunk line system leading to the Coast. Gulf's new ten-inch line from Ranger to Wortham and a new eight-inch parallelling an old six-inch line from Wortham to Lufkin will handle three distinct grades of crude, and the new tankage is to be used in keeping the various grades of oil separate after reaching the Mid-Continent trunk line system.

Steel Tanks Being Built

El Dorado, Kan.—The Chicago Bridge & Iron Works, of Chicago, recently started construction on three 80,000-barrel steel storage tanks for the Skelly Oil Company which has a tank farm here.

Chicago Bridge & Iron Works is also constructing two 80,000-barrel tanks for the Vacuum Oil Company at Lockport, La.

Marland Passes Dividend

New York.—The Marland Oil Company omitted the quarterly dividend due at this time. The passing of the Marland Company dividend occasioned no surprise in financial circles of Wall Street, as such action has been predicted for some time, owing to the relatively poor earnings and the apparent reluctance of the directors to cut into reserves. Declining prices for crude oil have cut deeply into the Marland income.

The quarterly rate has been $1 a share since December, 1925.

West Texas Production

CRANE COUNTY

	Producing Wells	Daily Average
Church & Fields—		
Humble Oil & Refining Co.	8	7,865
Eastland Oil Co. & Collett-O'Keefe	4	6,420
Simms Oil Co. & Atlantic	11	6,080
Tidal Oil Co. & Turman-Maxwell	8	4,490
Gulf Production Company	7	2,530
Magnolia Petroleum Company	17	2,195
Geo. Church & Bert Weekly	1	1,155
Independent Oil & Gas Company	2	1,155
Carl Cromwell & Pickrell	1	635
Prairie Oil & Gas Company	7	540
Geo. Church & Fields	2	475
The Texas Company	1	385
Stidham & Thrasher	1	10
Totals	70	27,515
Gulf-McElroy—		
Gulf Production Company	20	9,965
Marland-Hughes—		
Marland Oil Company et al	18	705
The Texas Company	10	335
McMan Oil & Gas Company	2	120
Independent Oil & Gas Company	1	10
Totals	31	1,170
Totals for Crane County	121	38,650

UPTON COUNTY

Roxana Petroleum Corporation	30	4,045
Dixie Oil Company	27	3,130
Marland Oil Company	79	3,070
T. P. Coal & Oil Company	11	2,875
Independent Oil & Gas Company	25	975
Prairie Oil & Gas Company	5	960
Gulf Production Company	12	830
The Texas Company	16	500
Amerada Petroleum Corporation	5	350
Sun Oil Company	10	325
Humble Oil & Refining Company	7	235
Wentz Oil Corporation	3	115
Simms Oil Company	3	105
Republic Prod. Co. & Marland	5	100
Atlantic Oil Producing Co.	1	35
McMan Oil & Gas Company	1	40
Texon Oil & Land Company	1	25
Totals	241	17,715

PECOS COUNTY

Mid-Kansas & Transcontinental	7	*13,630
Texon Oil & Land Company	1	5
Totals	8	13,635

REAGAN COUNTY

Big Lake Oil Company	101	19,150
Texon Oil & Land Company	71	7,195
Totals	172	26,345

WINKLER COUNTY

Southern Crude Oil Purchasing Co.	3	*575
Gulf Production Company	1	*205
Independent Oil & Gas Company	1	5
Totals	5	785

JONES COUNTY

Phillips Petroleum Company	8	1,095
Marland Oil Company	3	495
Mid-West Exploration Co.	4	320
Atlantic Oil Prod. Co. et al	1	30
Totals	16	1,940

MITCHELL COUNTY

The California Company	84	2,590
Magnolia Petroleum Company	19	600
Atlantic Oil Producing Company	8	360
Eastland Oil Co. et al	9	330
Tidal Oil Company	2	20
Fred Carey et al	1	15
Totals	123	3,915

HOWARD COUNTY

Marland Oil Company	32	1,595
Magnolia Petroleum Company	24	850
Pure Oil Company	2	290
Reeves & Apperman et al	2	195
Bristow & Merrick	3	180
Lockhart & Company et al	7	125
Humble Oil & Refining Company	2	50
Tidal Oil Company	2	50
Dixie Oil Company	1	25
Gulf Production Company	2	25
Mid-West Exploration Co.	1	15
Comet Petroleum Company	1	10
Totals	79	3,410

CROCKETT OUNTY

Humble & Marland Oil Company	9	800
J. K. Hughes Development Co.	4	250
Republic Production Company	2	245
Carl Cromwell	4	155
Gulf Production Company	6	120
Humble Oil & Refining Company	2	60
Roxana Petroleum Corporation	1	20
Totals	28	1,650

GLASSCOCK COUNTY

Marland & Texon Oil & Land Co.	1	35

SCURRY COUNTY

Nortwest Company	4	25

ECTOR COUNTY

J. S. Cosden et al	1	15

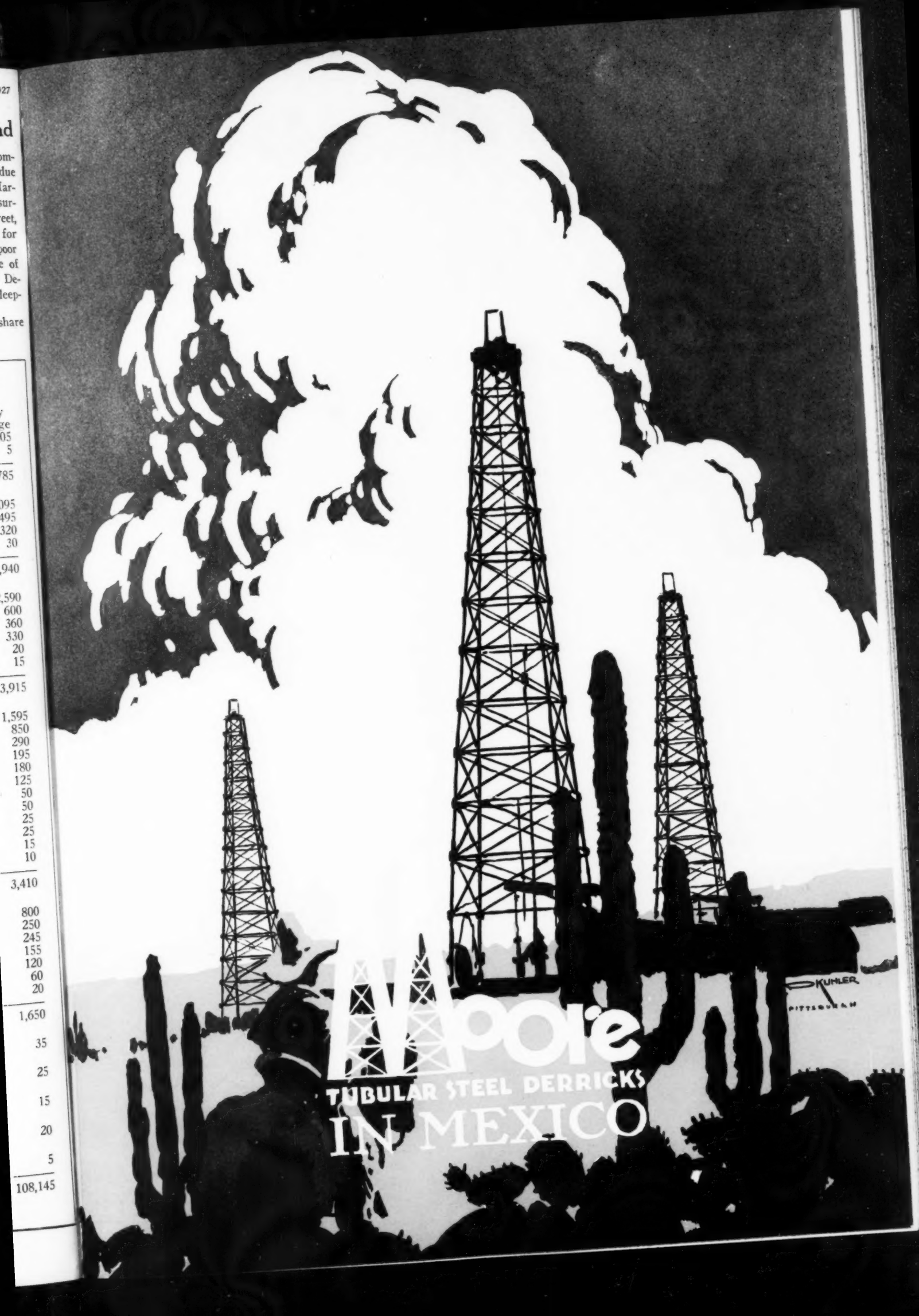
LOVING COUNTY

Lockhart & Company	1	20

GARZA COUNTY

Emerald Oil Company	1	5
Grand totals past week	801	108,145

*Production pinched.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Casper, Wyo. Shreveport, La. El Dorado, Kan. El Dorado, Ark.

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision;

Month—	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Ark.	Eastern States	Rocky Mountain	California	United States Ave.	Gross
January 1926	449,370	100,130	260,180	90,290	43,990	**181,190**	**101,000**	**102,300**	**621,300**	**1,946,980**	**60,356,380**
February	450,037	101,937	245,989	91,550	45,090	**169,676**	**99,000**	**98,412**	**605,250**	**1,909,637**	**53,469,836**
March	454,762	103,300	260,262	92,712	48,787	164,312	97,625	102,325	604,500	1,929,562	59,816,422
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387	58,421,610
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990	61,875,690
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187	60,395,610
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470	63,936,570
August	465,137	111,600	381,550	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662	67,042,522
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862	65,425,860
October	497,120	114,720	439,490	170,350	58,200	149,810	109,500	99,060	611,600	2,259,850	70,055,350
November	551,225	115,425	475,987	176,425	56,575	144,100	111,125	93,537	641,325	2,365,475	70,964,250
December	561,012	118,950	483,050	181,263	55,137	139,250	110,375	87,650	659,925	2,396,112	71,279,472
January 1927 . .	591,570	117,490	460,910	176,330	53,030	132,648	108,100	83,910	655,660	2,385,650	73,955,150
February, 1927 ..	683,775	116,200	479,175	154,975	52,850	128,362	107,250	85,237	642,775	2,455,612	69,157,136
March 1927	707,187	115,612	475,375	154,262	51,450	124,662	104,500	87,200	644,350	2,462,625	76,341,375
April 1927	723,820	115,510	476,920	155,420	50,670	114,860	107,500	89,130	643,520	2,477,350	74,320,500
May, 1927	716,175	114,675	488,125	151,375	47,465	113,525	113,625	89,625	633,225	2,491,975	77,374,910
June 4, 1927	751,500	113,750	494,200	150,570	47,500	113,000	114,000	86,350	636,400	2,505,300	.....
Increase	4,300	.....	2,700	.....	350	.....	.....	.....	10,400	9,000	.....
Decrease	.....	1,450	.....	1,980	.....	750	1,500	3,100	.....	.....	.....

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 4	May 28
Hutchinson County	112,595	107,375
Gray County	12,805	13,945
Carson County	12,810	13,225
Wheeler County	2,215	2,850
Others	25	55
Totals	140,450	137,450

NORTH TEXAS

Burkburnett	12,500	12,650
Electra	13,050	13,200
Iowa Park-KMA	3,500	3,650
Wilbarger	13,000	13,050
Archer County	30,000	30,100
Clay County (Petrolia)	750	750
Baylor County	100	100
Montague and Cooke Cos.	14,550	14,700
Totals	87,450	88,200

WEST CENTRAL TEXAS

Stephens County	8,800	8,950
Eastland-Desdemona	7,050	7,250
Brown County	28,820	25,900
Coleman County	1,200	1,200
Callahan County	3,900	4,000
Shackelford County	11,450	11,650
Young County	8,500	8,700
Throckmorton County	3,000	3,000
Jack County	500	500
Palo Pinto County	1,700	700
Jones County	2,250	2,400
Mitchell-Scurry Cos.	3,650	3,700
Howard County	2,700	2,910
Reagan County	26,400	26,650
Crane-Upton Counties	65,670	62,245
Crockett County	1,200	1,300
Pecos County	13,110	16,670
Winkler County	800	895
Others	3,500	1,830
Totals	193,400	192,350

EAST CENTRAL TEXAS

Mexia	11,000	11,100
Currie	600	600
Richland	900	900
Wortham	3,000	3,100
Corsicana-Powell	19,000	19,050
Nigger Creek	4,000	4,100
Totals	38,500	38,850

SOUTHWEST TEXAS

Luling	16,450	16,600
Lytton Springs	2,100	2,125
Somerset	1,200	1,200
Laredo District	14,000	14,050
Piedras Pintas	50	50
Others	600	625
Totals	34,400	34,650
T'ls Tex. (Outside Gulf Coast)	494,200	491,500

TEXAS GULF COAST

West Columbia	9,925	10,025
Damon Mound	935	935
Big Creek	4,175	4,275
Boling	2,055	2,050
Blue Ridge	2,500	2,550
Pierce Junction	8,850	9,020
Humble	3,600	3,700
Goose Creek	8,535	8,735
South Liberty	3,100	3,230
Hull	17,550	17,890
Saratoga	1,000	1,100
Batson	1,490	1,520
Sour Lake	4,400	4,545
Spindle Top	57,905	58,000
Orange County	5,500	5,115
Others	4,580	4,860
Totals	136,100	137,550

OKLAHOMA

North Braman	4,950	5,650
South Braman	3,350	3,350
Blackwell	3,800	3,800
Hubbard	7,750	7,800
Thomas	5,400	4,450
Tonkawa	21,950	22,750
Garber	14,300	14,850
Burbank	45,550	14,450
Osage (outside Burbank)	32,950	33,750
Watchorn	2,450	2,450
Cushing	21,500	21,450
Yale Jennings	11,650	11,700
Davenport	3,350	3,400
Bristow Slick	27,150	27,100
North Okmulgee	17,100	17,150
Lyons Deaner	5,500	4,400
Stroud	1,400	1,400
Cromwell	12,650	12,650
Papoose	7,100	6,850
Wewoka	19,050	19,100
Duncan District	7,050	7,000
Earlsboro	63,750	63,300
Graham	7,900	7,900
Fox	1,850	1,850
Healdton	14,900	14,900
Seminole	296,750	293,550
Hewitt	10,000	10,000
Scholem Alechem	16,700	15,750
Others	63,700	64,450
Totals	751,500	747,200

CALIFORNIA

Seal Beach	54,000	44,000
Sante Fe Springs	41,000	41,000
Long Beach	96,000	94,000
Huntington Beach	76,000	76,000
Torrance	23,500	24,000
Dominguez	17,500	17,500
Rosecrans	10,500	10,500
Inglewood	36,000	36,000
Midway-Sunset	91,000	91,000
Ventura Avenue	37,700	38,800
Others	153,200	153,200
Totals	636,400	626,000

ARKANSAS

El Dorado	6,300	6,350
Smackover Light	11,300	10,950
Smackover Heavy	88,600	89,700
Stephens	1,400	1,350
Nevada	1,450	1,450
Lisbon	3,850	3,850
Others	100	100
Totals	113,000	113,750

KANSAS

Florence-Covert	1,800	1,800
Peabody-Ebling	3,750	3,750
Eldorado-Towanda	13,700	13,700
Augusta-Fox Bush	3,750	4,400
Rainbow Bend	2,400	2,400
Russell	2,950	3,050
Greenwood County	37,500	38,000
Churchill	18,550	19,400
Others	28,700	28,700
Totals	113,750	115,200

NORTH LOUISIANA

Homer	5,150	5,200
Haynesville	7,700	7,750
Caddo Light	10,050	9,650
Caddo Heavy	4,500	4,400
DeSoto-Red River	3,900	4,300
Elm Grove	700	650
Bellevue	1,400	1,400
Cotton Valley	5,650	5,650
Urania	8,050	8,150
Pleasant Hill	400	....
Totals	47,500	47,150

LOUISIANA GULF COAST

Vinton	5,250	5,360
Lockport	6,000	6,045
Evangeline	1,000	1,030
Edgerly	700	700
Others	1,550	1,865
Totals	14,500	15,000
Totals Gulf Coast	150,570	152,550

MOUNTAIN STATES

WYOMING

Salt Creek	45,600	42,950
Grass Creek	2,550	2,400
Elk Basin	850	1,050
Big Muddy	2,750	2,850
Lost Soldier	1,800	3,050
Rock River	2,800	2,700
Lance Creek	500	550
Teapot Dome	1,300	950
Others	3,800	3,750
Totals	61,950	60,250

MONTANA

Cat Creek	2,300	2,300
Sunburst	11,200	11,200
Others	200	200
Totals	13,700	13,700

COLORADO

Moffats (Craig)	1,750	2,000
Fort Collins	2,900	7,050
Florence	900	900
Others	1,600	1,600
Totals	7,150	11,550

NEW MEXICO

Table Mesa	600	250
Artesia	750	600
Hogback	1,700	1,700
Rattlesnake	500	1,400
Totals	3,550	3,950
Totals Mountain States	86,350	89,450

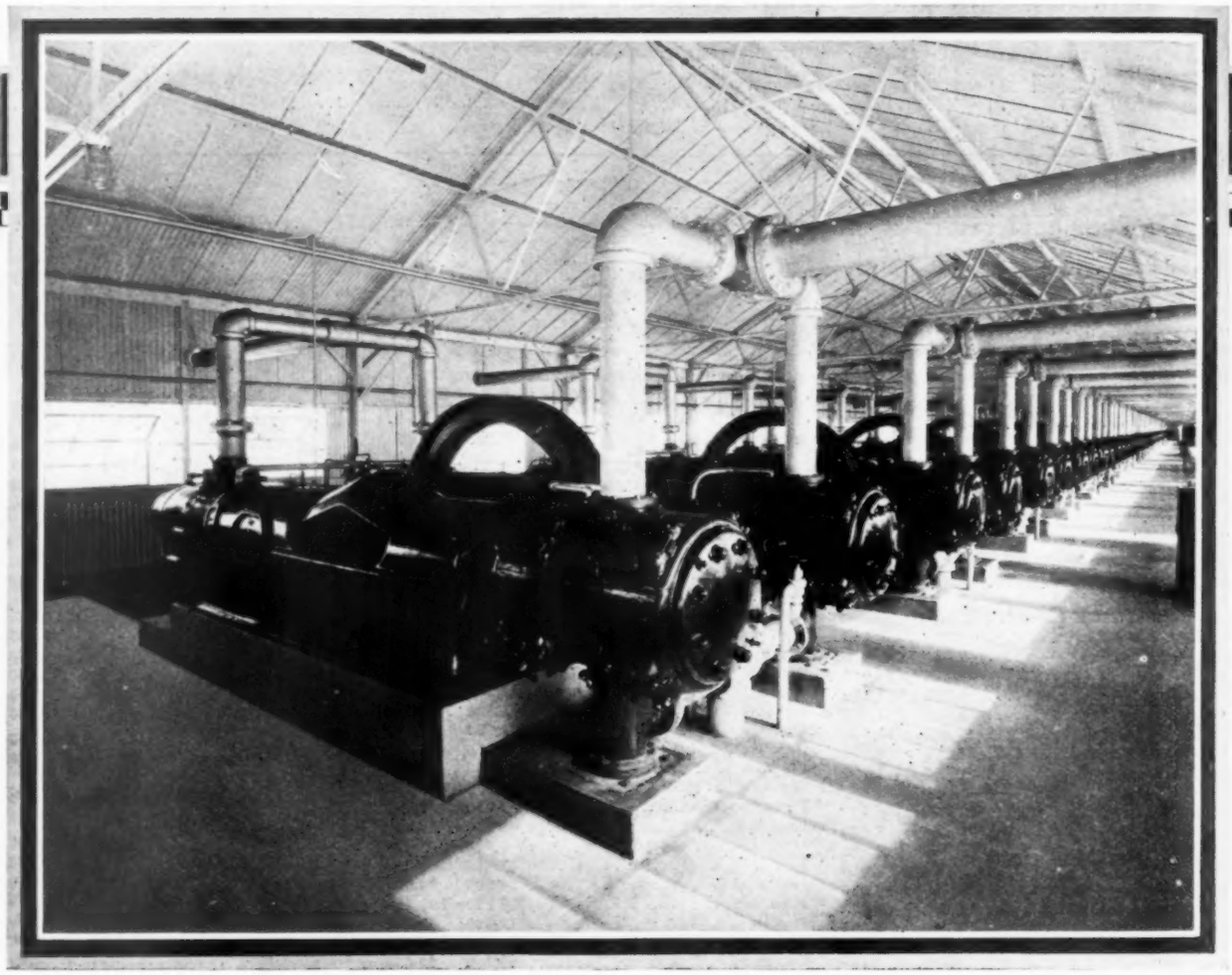
EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	114,000	115,500

PRODUCTION SUMMARY

East of Rockies	1,870,900	1,872,300
United States	2,507,300	2,498,300

Phillips Petroleum Gasoline Plant



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or
125 W. First Street
TULSA
Warehouses at McCamey, and Sweetwater, Texas; and Artesia, New Mexico

CLARK COM

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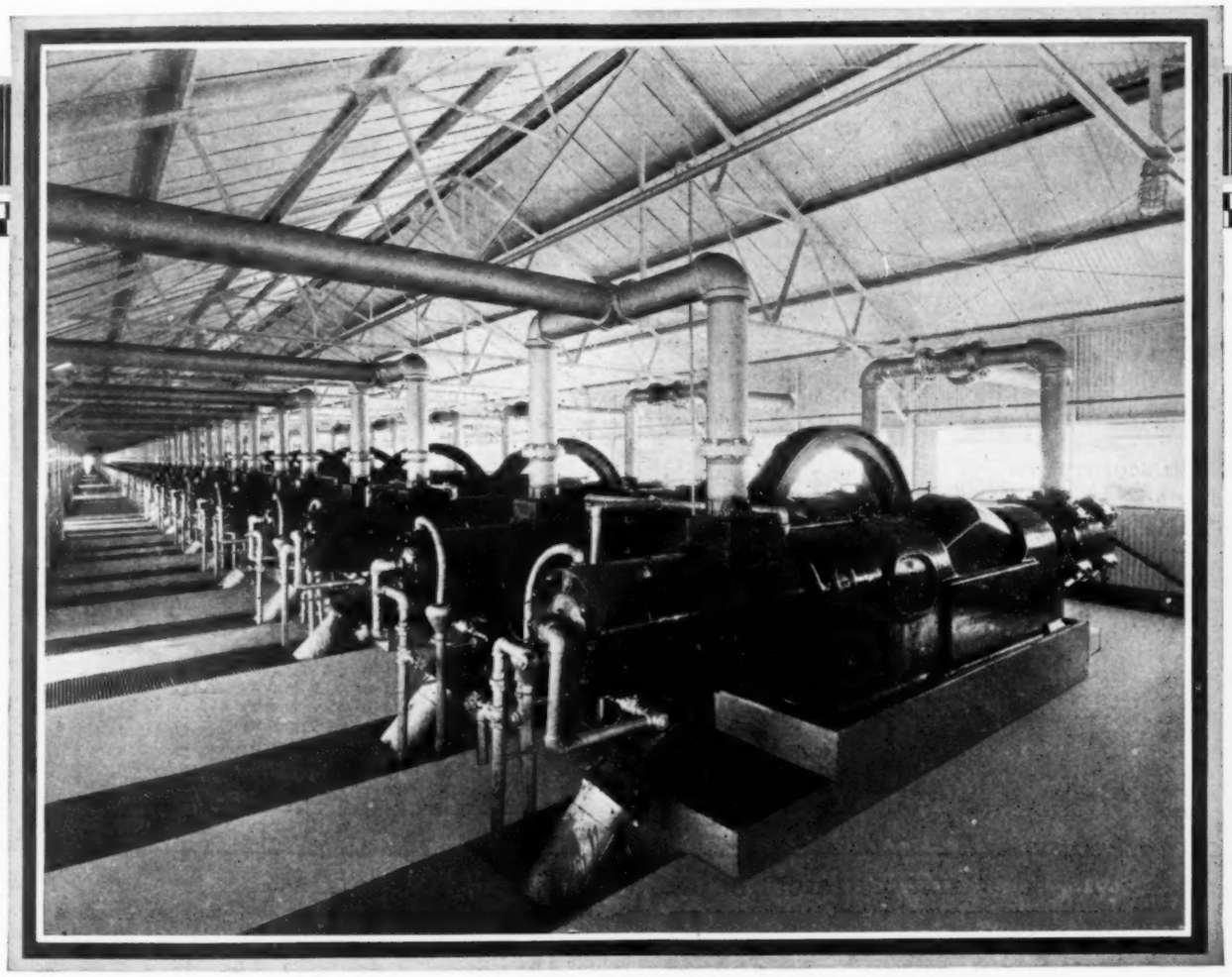
Company's Johnson at Borger, Texas



SMITH-BOOTH-USHER COMPANY

125 S. Central Ave., Los Angeles
50 Fremont St., San Francisco

MPRESSORS

Say you saw it in The OIL WEEKLY

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	June 8 1927
New York Transit	$2.90
Bradford District	2.90
National Transit	2.80
Southwest	2.80
Eureka	2.75
Buckeye	2.60
Macksburg	2.80
Gaines	2.60
Somerset	1.70
Cabell	1.60
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.35
Keister	1.30

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.77

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas

	June 8 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Magnolia Petroleum Company

Below 33	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 to 38.9 gravity	1.17
39 to 39.9 gravity	1.19
40 to 40.9 gravity	1.21
41 to 41.9 gravity	1.23
42 to 42.9 gravity	1.25
43 to 43.9 gravity	1.27
44 to 44.9 gravity	1.29
45 to 45.9 gravity	1.31
46 to 46.9 gravity	1.33
47 to 47.9 gravity	1.35
48 to 48.9 gravity	1.37
49 to 49.9 gravity	1.39
50 to 50.9 gravity	1.41
51 to 51.9 gravity	1.43
52 and above	1.45

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie Moran and Nocona Crude

Humble O. & R. Co.* and Texas Co.

	June 8 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, $1.00 per barrel, posted by Magnolia.

*Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes purchased at agravity lower than 28 degrees will be paid for at the posted price for 28 degrees gravity.

SOUTH TEXAS

Mirando 1.00

SOMERSBT

Grayburg

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41

(Continued on page 56)

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.7.	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	.89	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
45-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

Unit Installation Permits Expansion With Increasing Production

"Petreco," the electrical process for the dehydration of crude oil emulsions is built on the unit system, making it practical for installation on small producing wells, with quick and economical availability of additional units as required, or the transfer of one or more units from one location to another.

"Petreco" is the proven, practical and economical process for raising the gravity and raising the price of your emulsified crude.

"The Electrical Process for the Dehydration of Crude Oil Emulsions" is an interesting treatise on this process which surely and economically takes the loss out of "cut" oil production. A copy will be mailed on request, and you should have it.

PETROLEUM RECTIFYING COMPANY of CALIFORNIA

306 Union Oil Bldg.
Los Angeles, Calif.

Petroleum Bldg.
Houston, Texas

	June 8 1927
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

MARKHAM
The Texas Company

All grades	1.00

LULING

All grades	1.00

TEXAS PANHANDLE
Magnolia Petroleum Company

Hutchinson, Carson and Gray counties, all grades	.95
Humble Oil & Refining Company, Gulf Refining Company and Kay County Gas Company all grades	.95

Gray and Wheeler Counties
Humble Oil & Refining Company

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

Crane-Upton-Crockett* Counties
Gulf, Humble and Kay County Gas Company

Below 26 gravity	.70
26 to 26.9 gravity	.72
27 to 27.9 gravity	.74
28 to 28.9 gravity	.76
29 to 29.9 gravity	.78
30 to 30.9 gravity	.80
31 to 31.9 gravity	.82
32 to 32.9 gravity	.84
33 to 33.9 gravity	.86
34 to 34.9 gravity	.88
35 to 35.9 gravity	.90
36 and above	.92

*Gulf does not post in Crockett County.

Magnolia Petroleum Company and Kay County Gas Company

Howard County (Chalk Field)	1.05

WYOMING-MONTANA
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.33
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	95
Lance Creek	1.33
Mule Creek	1.10
Notches	.60
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.55
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20

	June 8 1927
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADIAN CRUDE	
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS
(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56

	June 8 1927
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS
(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.02
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER
(Louisiana Oil Refining Company, Atlantic Oil Producing Company, and Shreveport-Eldorado Pipe Line Company)

Below 24 gravity	$1.00
24 to 27.9 gravity	1.15
28 to 28.9 gravity	1.17
29 to 29.9 gravity	1.19
30 and above	1.21

Other Companies

Below 24 gravity	1.00
24 and above	1.25
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Cotton Valley	1.00
Calion	1.00

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
(American Petroleum Institute Figures. Barrels of 42 gallons)

	Week Ended May 28	Week Ended May 21
AT ATLANTIC COAST PORTS—		
Baltimore	62,000	154,000
Boston	65,000	130,000
New York	650,000	499,000
Philadelphia	78,000	143,000
Others	108,000	75,000
Total	963,000	1,001,000
Daily average	137,571	143,000
AT GULF COAST PORTS—		
Galveston District	20,000	.....
New Orleans and Baton Rouge	229,000	262,000
Port Arthur and Sabine District	60,000	.....
Tampa	.....	.....
Total	309,000	262,000
Daily average	44,143	37,429
AT ALL U. S. PORTS—		
Total	1,272,000	1,263,000
Daily average	181,714	180,429
Daily average four weeks ended	184,036	174,250

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS
(American Petroleum Institute Figures. Barrels of 42 gallons)

	Week Ended May 28	Week Ended May 21
AT ATLANTIC COAST PORTS—		
Baltimore	75,000	151,000
Boston	.....	163,000
New York	78,000	72,000
Philadelphia	.....	129,000
Others	.....	115,000
Total	153,000	630,000
Daily average	21,857	90,000
AT GULF COAST PORTS—		
Total Atlantic and Gulf Coast Ports	153,000	630,000
Daily average	21,857	90,000
Daily average four weeks ended	54,714	80,179
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:		
Crude	75,000	.....
Gasoline	78,000	391,000
Gas Oil	.....	167,000
Fuel Oil	.....	72,000
Total	153,000	630,000

If it's worth drilling ~ it's worth protecting

You can't tell a good valve by merely looking at it—it might be nickel trimmed to look like a million dollars, yet down under the skin may be hidden defects that cause a break and the loss of thousands of barrels of oil.

The point is, you need a drilling valve that's kerosene tested and certified by an independent laboratory organization before being shipped to the oil fields.

Kerotest Valves are the only valves so tested and inspected—only the kerosene test can reveal those tiny flaws—only with Kerotest Valves do you get a certificate of inspection showing that the valve has been tested with Kerosene under 2500 pounds pressure.

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KEROTEST

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Say you saw it in The OIL WEEKLY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, Morris 1, nw ne se 21-2s-3w	92	2222
Morrison 1, se 32-1s-3w	*	3700
CREEK COUNTY—		
Silurian Oil, Starr 24, sw se ne 17-19-7e	150	2421
Producers Oil Corp., Forres 2, se nw se 36-17-8e	75	2771
Roxana, Sewell 3, se sw ne 18-19-9e	450	2848
Nowata O. & R. & Independent O. & G., Pemberton 3, c w l ne sw	125	3064
Thompson & Black, Turner 2, se nw 12-17-10	20	2428
Misener et al, Black-Phillips 11, sw ne ne se 17-17-11e	¶7	1940
C. G. Tibbens, Fobes 2, se sw sw 20-15-9e	¶6	2731
H. C. Wilson, Bogy 1, se sw se 23-18-10e	*	3214
McLean et al, Land 1A ne se se 2-18-11e	*	2435
Wood Oil, McIntosh 1, nw ne nw 13-17-11e	*	2752
S. J. Smith et al, S. Fife 2, ne nw sw 3-17-11e	*	2368
COMANCHE COUNTY—		
Mid-Kansas, Cox 1, ne se ne 30-1s-13w	*	1920
GARFIELD COUNTY—		
Sinclair, North Walker 72, nw se nw ne 13-32-4	25	3710
GRADY COUNTY—		
Carter, Thelma Ball 1, nw se se 21-3n-5w	70	2323
Amerada, Hicks 4, ne nw ne 21-3n-5w	895	1730
Gypsy, Kayser 5, sw ne sw 16-3n-5w	150	1774
Hall & Briscow, Dryden 3, sw ne se 35-5n-8w	¶22	2380
Magnolia, Cassie-Kerans 1, nw ne nw 28-3n-5w	*	3605
Russell 1, nw sw sw 21-3n-5w	*	3416
McBride et al, Mitchell 2, se ne sw 34-3n-5w	*	....
Mitchell 1, ne sw 34-3n-5w	*	1850
GARVIN COUNTY—		
Magnolia, N. Newberry 4, se nw sw 14-1n-3w	*	1954
HUGHES COUNTY—		
Amerada, Hully 2, sw nw nw 6-9-n-10e	295	3746
Minnehoma, Cain 6, se ne ne 1-9-9e	50	3805
KAY COUNTY—		
Marland, Hockstatter 3, b, ne sw 1-26-2w	265	3620
Blackwell O. & G., Nix 11, c n½ se 18-28-1e	150	3297
Denton 1, c sw se 31-27-1e	*	887
LINCOLN COUNTY—		
I. T. I. O., Lindsey 1, ne nw ne 6-16-5e	50	4280
Wilcox, Camden 1, nw 16-15-5e	*	4468
MUSKOGEE COUNTY—		
H. E. Williams, Sango 1, se ne nw 17-15-17e	¶20	142
J. M. Flotz, P. Ponds 1, se 20-15-17e	*	2000
C. M. Whaley et al, Rector 1A, se nw se 8-15-17e	*	1500
McINTOSH COUNTY—		
John Aggas et al, E. Perryman 1, c w l nw nw 11-12-15e	*	1312
OKMULGEE COUNTY—		
Simms, L. Doyle 20, c w l ne sw 15-13-14e	15	1925
Atlas Oil Co., Rowe 3, c n l ne nw 21-16-14e	10	2230
A. F. Boone, L. Rentie 4, se ne 18-14-15e	*	2810
J. W. Roberts, B. Carter 2, sw ne ne se 10-15-14e	*	2026
Shaffer O. & R., Kelly 1, se sw ne 29-15-12e	*	2753
Gallagher et al, J. Rentie 3, ne nw 18-14-15e	*	2300

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	7	10	4	5	..	1	3	3	591	592
California	15	16	15	15	..	..	..	..	10,561	9,388
Colorado	..	1	..	1	..	..	..	..	....	150
Indiana	3	3	3	..	..	..	..	3	162	....
Illinois	3	4	..	3	..	..	3	1	....	136
Kansas	19	29	7	13	1	2	11	16	1,715	4,652
Kentucky	29	25	21	17	3	3	5	7	696	638
Louisiana	11	12	3	4	1	2	7	6	130	960
Michigan	5	7	4	7	..	..	1	..	72	93
Mississippi	..	1	..	..	..	..	..	2	....	....
Montana	5	4	1	3	2	1	2	..	10	920
New York	..	13	..	13	..	..	..	..	....	27
New Mexico	..	..	..	..	..	..	..	..	....	....
Ohio	43	35	24	19	8	3	11	4	692	347
Oklahoma	94	95	53	53	5	12	36	34	65,335	43,617
Pennsylvania	4	56	..	47	3	8	1	3	....	127
Tennessee	..	1	..	1	..	..	..	..	....	350
Texas	112	145	67	70	2	7	43	35	22,606	22,154
West Virginia	32	18	7	6	20	9	5	3	170	45
Wyoming	4	1	4	..	..	1	..	3	345	....
Totals	386	476	213	278	45	49	128	120	103,085	84,196
Increase this week	90	..	..	..	..	..	8	..	18,889	....
Decrease this week	..	..	65	..	4	..	..	..	....	....

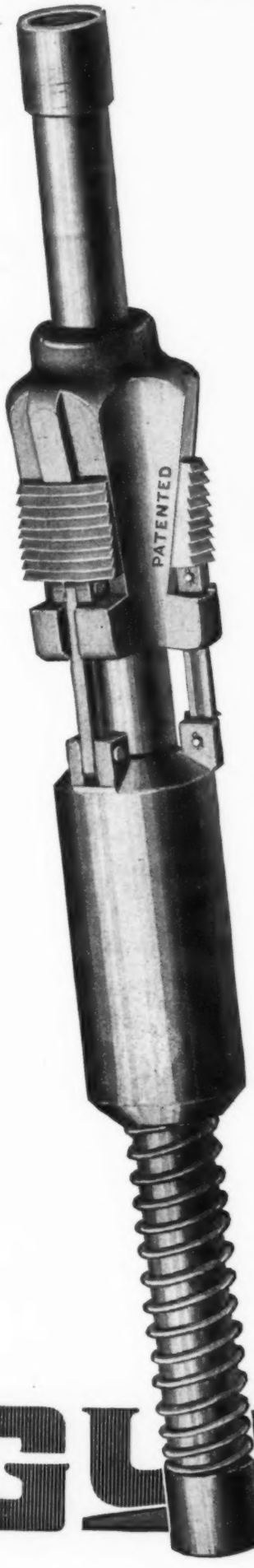
NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Company, Well and Location	Initial Production Bbls.	Depth
OSAGE COUNTY—		
Superior Oil Corp., 4, ne nw 20-23-10e	15	2509
Skelly, 5, nw sw sw 27-27-6e	1275	2967
3, se sw sw 27-27-6e	1420	2959
4, sw 27-27-6e	920	2942
2, sw se sw 27-27-6e	530	2968
Phillips Pet., 5, nw sw se 1-27-5e	65	3004
Winona Oil, 1, nw sw 15-28-10e	5	1897
Tidal Osage Oil, 3, ne sw 20-24-93	50	2179
Marland, 1, sw se se 27-25-9e	25	2137
Phillips, 8, ne se ne 29-26-6e	125	2974
7, nw se 10-21-9e	*	3020
Sam Sitrin, 1, se nw 5-22-10e	*	2125
Gypsy, 1, se nw 17-23-10	*	2655
PAWNEE COUNTY—		
Gypsy, Pollock 5, nw sw sw 33-20-5e	90	2854
Magnolia, Tucker 1, ne se 20-22-3e	*	4187
Redding 1, sw se nw 9-20-6e	*	3427
Duff 1, se sw nw 9-20-6e	*	3250
Industrial O. & G., Jamison 1, sw se 13-20-9e	*	2885
Arkansas Fuel Oil, Reams 1, c s l nw 5-21-7e	*	3286
PAYNE COUNTY—		
Magnolia, C. Walker 3, "A'," ne se sw 8-19-5e	80	3024
PONTOTOC COUNTY—		
La Salle et als, Fee 1, c s l n½ n½	135	2700
POTTAWATOMIE COUNTY—		
Gypsy, State 2, nw ne 16-9-5	540	4337
Magnolia, Bruant 1, se nw 9-9-5	3513	4301
Phillips Gram 4, sw nw se 9-9-5	1350	4320
PITTSBURG COUNTY—		
Pattison et als, Smith ne sw ne 32-9-16e	*	4480
SEMINOLE COUNTY—		
Independent O. & G., Jefferson 2, sw ne 7-9-8	50	3318
Carter et al, C. Island 2, se nw se 18-9-8	35	3270
I. T. I. O., Davis 1, nw sw se 15-8-8	195	3296
Livingston 3, nw se nw 15-8-6	2780	4150
Livingston 6, sw ne nw 15-8-6	5200	4012
Walker 4, sw se se 15-8-6	2150	4154
Pure Oil, Strothers "B"1, nw 36-9-6	1655	4194
Wilcox, Gluck 2, se nw ne 4-9-6	2060	4398
Phillips, Strothers 4, se nw se 27-9-6	1280	3997
Carter, Hilly 1, ne se 23-8-6	¶11	4036
Wise 2, nw ne ne 23-8-6	6665	4258
Wise 3, se ne ne 23-8-6	3310	4306
Empire, Lacey 4, ne sw sw 14-8-6	3250	4088
Texas Co., Reed 2, sw ne 14-8-6	1950	4252
Gypsy, Walker 4, se nw se 15-8-6	3295	4255
Walker 6, se ne sw 15-8-6	5200	4237
Atlantic, Jones 3, se ne se 16-8-6	1380	4286
Magnolia, Sparks 4, nw sw sw 11-9-5	565	4310
Texas Co., Wilmott 3 ,se ne se 10-9-5	115	3588
Gypsy, Peters 3, nw sw sw 10-9-5	1995	4354
Harjo 1, ne sw 24-9-5	*	....
McMahon et al, Sewell 1, se nw swa 15-8-8	*	3304
STEPHENS COUNTY—		
Gilmer et al, Stewart 2, ne se se 24-1s-4w	1200	2995
TULSA COUNTY—		
Superior Oil Corp., Gaskins 2, c ne ne 16-19-10e	*	2055
WAGONER COUNTY—		
F. E. Webb, Barnett 4, nw 9-18-16e	*	740

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire, Jutchinson 1, sw ne 34-27-5e	230	2730
Blue Stem Oil, McLean 4, nw se sw 5-27-6e	50	2716
Patton et al's, Shriver 2, sw se se 33-27-6e	200	3096
Powell et al, Stone 1, ne sw 25-24-7e	*	2743
Dixie Oil et al's Weaver 1, ne se se se 1-28-5e	*	3172
Mid-Kansas O. & G., Blakeman 6, se sw 3-28-6e	*	3089
CHASE COUNTY—		
White Eagle, Lipps 1, c ne ne 31-18-7e	¶2	1148
COWLEY COUNTY—		
Porrester et al, Countryman 1, ne nw 4-33-7e	40	2819
Gypsy, Beeks 1, nw sw 4-34-3e	*	3986
GREENWOOD COUNTY—		
Parrish et al, Smith 1, nw ne sw 5-24-12e	10	1806
Cross et al, Hoover 1, ne se 36-24-12e	25	1611
Aikman et al, Waymire 1, sw ne ne ne 22-22-13e	*	1903
Sharpless et al, Thrall 1, nw 7-24-12e	*	1828
LYON COUNTY—		
Culp et al, Bibermyer 1, sw se 25-19-10e	*	2163
Leonard Pet., Hooper 1, se sw se 30-21-21e	*	1958
MARION COUNTY—		
Hartman & Skaer, Safford 1, ne nw sw 28-20-4e	*	2578
RICE COUNTY—		
Independent O. & G., Miller 2, nw ne ne 3-21-6w	1160	3386

Continued on page 62)



NO MORE OF THIS *for many operators*

Corkscrewed tubing (costing $2,000 to $20,000 per pile) is seen no more about the wells of a growing army of operators who make it a rule to protect **EVERY STRING OF TUBING** with a **GUIBERSON CATCHER.**

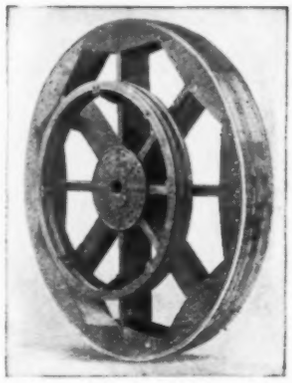
Because the GUIBERSON is the **only** catcher which has a strong spring, heavy striker weight, and dovetail tracks for slips—it is the **only** catcher which **insures positive tubing safety, under all conditions.**
Fully patented.

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas.
CALIFORNIA BRANCH: 1506 Santa Fe Ave., Los Angeles
402 W. First St., TULSA
321 S. Osage St., PONCA CITY
506 Trust Bldg., NEWARK, O.

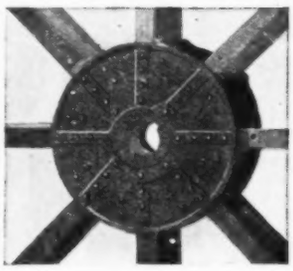
GUIBERSON
ER BE SAFE THAN SORRY

Say you saw it in The OIL WEEKLY



Moore Steel Band Wheel

Built for long, hard usage. Steel plate rims, one-piece rolled steel tug rim, rolled steel channel spokes, one inch face wood cants. Stocked in 10′, 11′, 12′ diam. with 12″ and 15″ face. Shipped in one piece ready to mount.



Riveted Flanges

The flanges are securely riveted in our shops; angle reinforcements give additional strength to spokes.

Moore Steel Tug Rim for Wooden Band Wheels

One piece, double V groove, rolled steel rim. Diameter 7′.

Other Moore Products

Steel Derricks
All Steel Drilling Rigs
Crumley Pumping Rig Units
Steel Pitmans · Crown Blocks
Steel Walking Beams

World Wide Service for Twenty Years

Here is the MOORE STEEL CALF

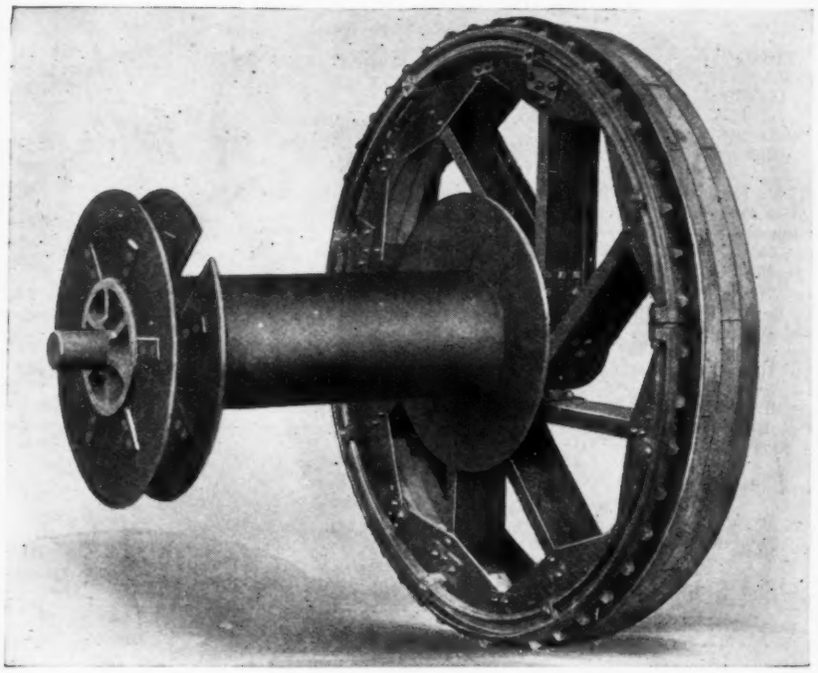
BUILT for strength, the Moore Steel Calf Wheel has an extra heavy steel pipe shaft, heated and shrunk on the gudgeons and riveted in place. The channel steel spokes are bolted tangent to the shaft, giving a direct push at its circumference. This construction assures maximum power.

The brake rim is of rolled steel plate segments. The sprocket rim is bolted to the inside rim which extends ½″ above the brake cants to prevent interference between the brake band and the sprocket chain.

Moore Steel Calf Wheels conform to A. P. I. dimensional standards in all respects.

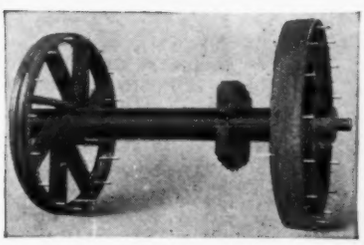
Moore All

WHEEL



Standard Specifications

Wheel diameter, 7′6″; shoulder-to-shoulder length, 6′3″; shafts of 16″ or 18″ diameter with ½″ wall; trunnions, 5″ diameter X 6″; 9″ or 12″ brake face. The standard wheel includes three spooling flanges. Heavier shafts on request.



Moore Steel Bull Wheel

Heavy shaft, shrunk and riveted on gudgeons. Tangent spokes exert direct push on shaft. One piece double V groove tug.

STEEL RIG EQUIPMENT

LEE C. MOORE & CO., *Inc.* PITTSBURGH · TULSA

Established 1907

DALLAS, TEXAS HOUSTON, TEXAS WICHITA FALLS, TEXAS BORGER, TEXAS PARKERSBURG, W. VA.
CASPER, WYO. SHREVEPORT, LA. EL DORADO, KAN. EL DORADO, ARK.

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
GREENE COUNTY—		
Philadelphia Gas Co., Hatfield 1	¶2	....
Carnegie Nat. Gas Co., Jones 1	¶3½	....
ALLEGHENY COUNTY—		
William Steer & Co., O'Neil 1	¶2½	....
WASHINGTON COUNTY—		
J. A. Cowden & Co., 1	*	....

WEST VIRGINIA

LINCOLN COUNTY—		
Hope Nat. Gas Co., J. Linville 1	¶1	....
Claude Linville 1	¶1	....
Union Gas Co., C. Richmond 2	¶1	....
T. A. & A. P. Mellon, C. A. Kearns 1	¶1	....
Cambridge Gas Co., J. M. Lucas 1	¶½	....
H. H. Dials & Co., Alice Ferrell 1	¶½	....
E. R. Cameron, F. Anderson 7	¶½	....
RITCHIE COUNTY—		
Hope Nat. Gas Co., Jordan 3	80	....
Henninghan & Hanlon, W. Vincent 1	¶¼	....
D. M. Heckert & Co., A. L. Britton 1	½	....
Maxwell, Chater & Co., B. W. Foutty 1	¶½	....
Rexroad & Co., John Ingrahan 1	*	....
CLAY COUNTY—		
Ohio Fuel Oil Co., P. C. Reed 1	25	....
Virginian G. & O. Co., Lockhart 11	30	....
South Penn Oil Co., R. P. Parker 7	10	....
ROANE COUNTY—		
Heck Oil Co., D. H. Burroughs 5	10	....
E. R. Tallman 1	15	....
BOONE COUNTY—		
Pure Oil Co., Federal Coal Co. 11	¶2	....
Federal Coal Co. 19	¶2	....
Lafollette & Co., 27	¶¼	....
MARSHALL COUNTY—		
Manufacturers L. & H. Co., L. & E. Pyles 2	5	....
Lynn Camp Oil Co., A. Hicks 1	¶2	....
CALHOUN COUNTY—		
Martin Crowley, J. Slider 1	¶1¼	....
Hope Const. & Refg. Co., W. A. Richards 1	¶¼	....
GILMER COUNTY—		
South Penn Oil Co., D. L. Holbart 1	*	....
McIntosh & Co., G. H. McCoy 1	¶1½	....
DODDRIDGE COUNTY—		
Hope Nat. Gas Co., H. Smith 1	¶1	....
Stahlnaker Hrs 3487	*	....
WETZEL COUNTY—		
Carnegie Nat. Gas Co., E. Stephens 1	¶2¼	....
Rufus Long 2	*	....
HARRISON COUNTY—		
Hope Nat. Gas Co., Marshall 1	¶1½	....
MARION COUNTY—		
Funk & Null, W. O. Mayne 1	*	....

KENTUCKY

OHIO COUNTY—		
Wood Oil Co., M. J. Elmore 3	190	718
Rex-Pyramid Oil Co., Lake Ambrose 2	160	677
Frank Lake 2	70	62[illegible]
White Plains O. & G. Co., J. Bob Ellis 6	60	527
Creek Drlg. Co., F. Lake 1	20	620
White Plains Oil Co., J. Midkiff 1	20	766
W. Coleman 2	*	598
Frank Russell & Co., Dodson 1	*	1093
Petroleum Expl. Co., C. Farmer 1	*	716
ESTILL COUNTY—		
McEldowney, Amsler & Co., R. Willis 1	*	....
Superior Oil Corp., Isam Ballard 18	5	....
T. W. Tyree 1	3	....
J. D. Alexander 13	2	....
West & Co., 9	2	....
WAYNE COUNTY—		
Kennedy, Taylor & Co., J. B. Stinson 6	*	....
ELLIOTT COUNTY—		
Edra Lee O. & G. Co., J. B. Dials 6	5	....
BARREN COUNTY—		
Samson Oil Co., Browning 5	50	453
Johnson 2	8	522
Hunt, Mitchell & Co., V. Taylor 10	10	....
V. Taylor 11	50	583
Star O. & G. Co., Richardson 18	10	....
Craig, Smith & Co., Smith 18	6	461
J. R. Elliott, Kinslow 15	10	....
Jones 2	8	....

Company, Well and Location	Initial Production Bbls.	Depth
JOHNSON-MAGOFFIN COUNTIES—		
Oliver Jenkins & Co., B. F. Whitt 4	5	....
KNOX COUNTY—		
George & Touma, L. D. Holbrook 10	2	....
Dizney, Dizney, McGee & Co., Dizney 1	¶2	....
FLOYD-KNOTT COUNTIES—		
Ivyton O. & G. Co., A. Huber 1	¶2½	....
MENIFEE COUNTY—		
W. O. Bach, Unknown 1	¶1	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Cook, Palmer & Co., Coffman 5	5	....
Muskingum Gas Co., Densmoor 3	¶1¼	....
Worthington Bros., Liebrand 3	*	....
Ross Bros., T. Flesher 1	*	....

CENTRAL OHIO

GUERNSEY COUNTY—		
Ohio Fuel Sup. Co., L. J. Fulton 2	108	3665
J. R. Fulton 4	*	3690
L. J. Fulton 7	50	....
Pure Oil Co., A. B. White 1	40	3710
Producers & Refiners Co., A. Wright 2	¶3½	....
J. L. Chapman 2	¶3	....
W. McK. Smith, A. Slahie 3	75	....
Smith & Co., W. Cox 1	*	....
LICKING COUNTY—		
Whitmore Property, Tr., C. C. Conrad 1	*	....
E. H. Everett Co., L. Swigert 1	*	....
Shipley 1	95	....
H. C. Farmer & Co., Wright 1	2	....
J. H. Soles & Co., W. Coomes 3	40	....
W. L. Brown, W. P. Chapin 2	15	....
MEDINA COUNTY—		
M. C. & G. K. Rogers, Paul Perto 2	¶2¼	....
E. R. Edson Son Co., Packard 1 tr 31	2	385
Packard 2 tr 14	2	382
Wertz 19	2	390
ATHENS COUNTY—		
Ronshausen & Co., Chapman 2	*	....
Cook & Co., H. Kiley 3	*	....
Glendale Oil Co., Lick Run Coal 1	*	....
Daily & Son, Maxwell 1	5	....
CUYAHOGA COUNTY—		
Arthur & Simpson, C. L. Harrison 2	¶5	....
M. Harrison 2	¶2¼	....
G. Gessner 1	*	....
Hulse & Kundtz, G. H. Barnum 1	¶1¼	....
HOCKING COUNTY—		
Golden Rod Oil Co., Hartzel 2	75	....
Preston Oil Co., Marks 4	9	....
Limelight O. & G. Co., Lane 1	*	....
PERRY COUNTY—		
Melick Oil Co., Burley 1	20	....
Schull, Bloom & Co., Bradshaw 1	*	....
MUSKINGUM COUNTY—		
M. F. Whitehill, Francis Hrs 1	15	....
MEIGS COUNTY—		
Barneby & Frick, L. Genheimer 1	3	....

NORTHWESTERN OHIO

WOOD COUNTY—		
C. A. Browning, Browning 24	27	1198
G. L. Haubert & Co., Celden, Jr., 5	5	....
HANCOCK COUNTY—		
R. W. Kirk & Co., N. Schuert 1	2	1479
B. A. Rinehart, Rinehart 1	¶¼	1202
ALLEN COUNTY—		
C. A. Peavey, S. H. Vore 8	65.	1351
HARDIN COUNTY—		
H. E. Sschmidt, Earl Hite 5	35	1502

INDIANA

GIBSON COUNTY—		
J. S. Young, Jr. & Co., L. Jenkins 1	150	1409
DAVIESS COUNTY—		
Hartman, Sargent & Co., J. Swan 2	10	1169
SULLIVAN COUNTY—		
Raley Oil Co., Alex Raley 4	2	....

ILLINOIS

LAWRENCE COUNTY—		
Ohio Oil Co., Buchannan 7	*	1630
CLARK COUNTY—		
W. C. McBride, Inc., H. V. Blakeman 1	*	1020
WABASH COUNTY—		
Dain Oil Co., Holson-Dorney 7	*	1602

MICHIGAN

SAGINAW COUNTY—		
Bliss Pet. Co., F. Engel 2	25	2977

Company, Well and Location	Initial Production Bbls.	Depth
Ohio Oil Co., A. Kuhl 1	*	2356
Cavanaugh Oil Co., City Lot 1	25	1822
Bourdow Bros., Julia Gelinas 1	20	1825
Sun Oil Co., H. Deibel 1	2	1880

MOUNTAIN STATES

WYOMING

SALT CREEK—		
Midwest Ref. Co., Wyoming Asso. 18, nw 26-40-79	108	2020
Wyo. Asso. 6, sw 24-40-79	37	1957
Midwest 24, se 27-40-79	108	2055
Wyo. Oil Fields 31, nw 25-40-79	92	1155

MONTANA

KEVIN-SUNBURST—		
Ohio Oil Co., Putnam 8, 32-35-1w	10	1481
Homestake Explo., Pewters Permit "b" 3, nw 23-35-2w	¶2	1382
Dakota-Montana Oil Co., Reservation-Russell 2	*	....
Wilcox 1, ne 7-34-1w	*	1365
BAKER-GLENDIVE—		
Montana-Dakota Power Co. 9	¶7	....

CALIFORNIA

SEAL BEACH-ALAMITOS—		
Associated Oil Co., Bryant 1, wo	2098	4742
Geo. F. Getty, Alamitos 5	1400	4780
Marland Oil Co., Bixby 4, wo	2625	5750
Standard Oil Co., San Gabriel 12	2080	4681
HUNTINGTON TOWNSITE—		
Superior Oil Co., Walker	560	3999
HUNTINGTON BEACH—		
Standard Oil Co., B 57	92	4394
BREA-RICHFIELD—		
Standard Oil Co., A. U. W. 2	147	3018
Vejar 1	232	2902
Union Oil Co., A. & P. 5	435	4525
KERN FRONT—		
General Pet. Corp., Wetmore	100	2037
Geo. F. Getty, Tegler 19	150	2435
Standard Oil Co., No. 8	240	2363

ARKANSAS

OUACHITA COUNTY—		
Marine Oil Co., Umsted 11, 5-16-15	50	2362
UNION COUNTY—		
Lion Oil Ref. Co., Murphy H-2, 9-16-15	416	2316
Natural Gas & Fuel Corp., Bilyew 4, 9-16-15	30	2326
Bilyew A-1, 9-16-15	95	2299

LOUISIANA

CADDO PARISH—		
H. I. Morgan, Glassell 1, 10-20-15	35	2293
Standard, Stiles 183, 33-21-16	45	1836
Stiles 184, 33-21-16	50	1827
MOREHOUSE PARISH—		
Nat. Gas Prod. Co., Handy 1, 18-30-5e	¶10½	2164

LOUISIANA GULF COAST

LOCKPORT—		
Vacuum-Gulf's Bordages 2, wo	*	3750

TEXAS GULF COAST

HULL—		
Gulf, J. C. Baldwin Fee 20	900	3050
Mecom Oil Co., Taylor 2, wo	1800	3900
BLUE RIDGE—		
Gulf, Bassett Blakely "B" 9	*	3800
J. S. Abercrombie's West-Schenck 9	1150	3650
PIERCE JUNCTION—		
Gulf, W. H. Jones Fee 3, wo	600	4100
J. F. Bashara, Bender 2, wo	*	4200
ORANGE—		
Gulf, F. T. Peveto 11	380	4700
Rycade, State 5 "B", wo	2111	4200
Texhoma, Chesson 16, wo	*	3350
BIG CREEK—		
Gulf, J. H. P. Davis 1	*	4800
J. H. P. Davis 1 "A"	50	3400

The Pilger Mill Makes *Forged* Casing

THE Pilger process applies the principle of the forging hammer to the manufacture of seamless steel tubing. The large tube in the illustration below has just left the Pilger Mill where it was forged to its present length from a heavy walled seamless billet about eight feet long.

Pittsburgh Seamless Steel Casing

is made from the finest quality basic open hearth steel, and the Pilging process gives it a fine, uniform, dense texture that means utmost tensile strength and resistance to collapse. It is made in sizes up to 12 inches in diameter.

Pipe Storage Yard at Memphis

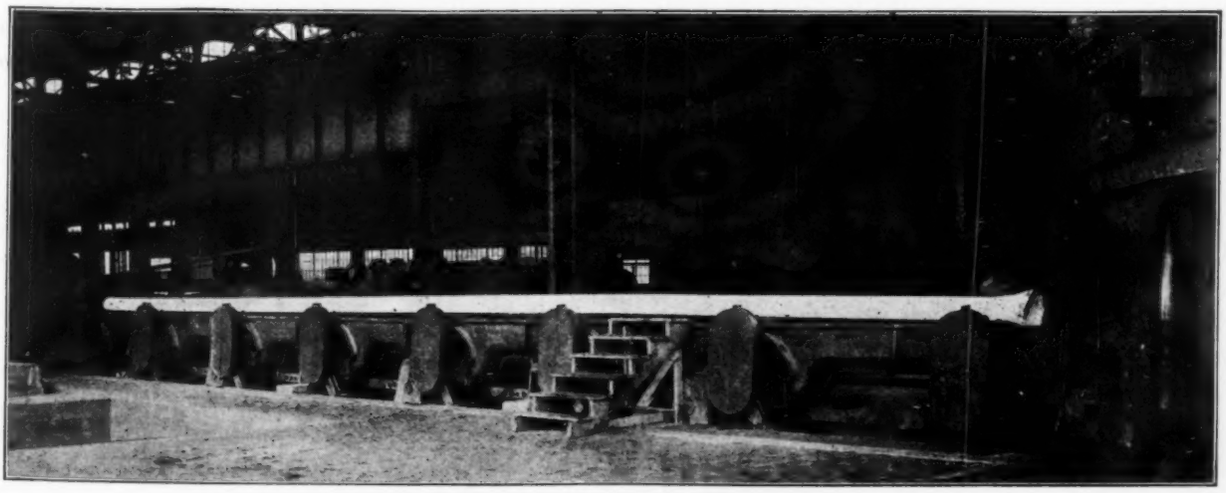
Our large storage stocks at Memphis enable us to give **Pittsburgh Seamless** service in the Mid-Continent and Gulf Coast fields at an average saving of from eight to ten days. We shall appreciate your inquiries and give them prompt attention.

Pittsburgh Steel Products Co.

PITTSBURGH NEW YORK CHICAGO DETROIT

Second National Bank Bldg. HOUSTON, TEX.

Atlas Life Bldg. TULSA, OKLA.



FORGED TUBE LEAVING PILGER ROLLS

WILDCATS FROM ALL SECTIONS

OKLAHOMA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
COMMANCHE COUNTY—		
Mid-Kansas, Cox 1, ne se ne 30-1-13	*	1920
LINCOLN COUNTY—		
Wilcox, No. 1, ne nw nw nw 16-15-5	*	4296
PITTSBURGH COUNTY—		
San Bois Gas Co.'s Cohler 1, sw nw 11-7-18	*	1911

BECKHAM COUNTY—Magnolia's 1, 21-9-23, lcn. Sayre's Davis 1, sw nw 24-9-23, dr 200 ft.

CANADIAN COUNTY — J. V. Bailey's Robinson 1, c nw ne 1-10-6; Carrol Oil Corp.'s North 1, ne 18-13-10, sd 1500 ft. Spears et al's Piatt 1, se ne 6-14-6, sd 3223 ft.

COMMANCHE COUNTY — Couch et al's Watson 1, ne sw ne 24-2-10, 8 in. 1750 ft, co 1750 ft.

CLEVELAND COUNTY — Mid-Continent Pet. Corp.'s Woodrow 1, sw nw 20-8-1, 8 in. 4010 ft. Magnolia's Le Feure 1, se sw 11-6-1, fsh 6 in. 3280 ft, td. Wiser's Byrd 1, sw nw 25-6-1, 8 in 3952 ft. Cromwell et al's Donavan 1, c sw 22-10-2, dr 3092 ft. Gault Brown's Alexander 1, c nw 7-9-1, cmt 8 in. 3732 ft. Sonner State's Vandeer 1, ne nw sw 15-7-1, 8 in 2994 ft.

CIMMARON COUNTY — Jake Phillip's 1, nw25-6-2, dr 2900 ft. Sinclair's 1, nw 22-5-2, rust 3010 ft. Ramsey Bros. State 1, c nw ne 27-5-5, dr 2350 ft. Gladys Belle's Israel 1, sw ne 25-3-7, dr 2680 ft.

DEWEY COUNTY—McCoy et al's Perfect 1, ne 9-18-5, dr 2472 ft.

GRANT COUNTY—Flannagan et al's Sherrer 1, ne sw 16-26-3, 8 in. 2602 ft, dr 2825 ft.

HARPER COUNTY—Hoffer's Cooper 1, nw se 14-25-22, 5 in. 4053 ft, sd.

KAY COUNTY—Ponca Lee Oil Co.'s McNeal 1, nw ne 32-26-2, td 2795 ft, sd. Tonkawa Dev. Co.'s McDaniels 1, se 15-25-1, sd 3050 ft. Miller Bros.' Anderson 1, nw se 10-25-1, ready to sp.

KINGFISHER COUNTY — Ramsey Bros.' Pool 1, se 25-17-5, run 6 in. 3811 ft. Pet. Eng. Core Drlg Co.'s Campbell 1, c nw se 6-16-7. McKenna et al's Sturgeon 1, nw sw 27-16-6, sd 2115 ft. Galt Brown's Johnson 1, c nw 26-16-5, dr 2700 ft.

LINCOLN COUNTY—Madden & Madden, Pickerall 1, sw se 20-15-6, sp 200 ft.

LOGAN COUNTY—Roxana's McCullough 1, sw ne se 30-18-4, sand 5808-11, flow 80 bbls by hds, dr 5879 ft. Bryan & Emery's No. 1, nw se 33-19-4, dr 4230 ft. Carter's Rogers 1, sw ne sw, cmt 6 in. 5036 ft, dr by plugs. Brown & Beleven's Lovell 1, sw nw 9-18-4, sd 4515, contract complete. T-P's Jewell 1, nw ne nw 27-18-4, dr 3904 ft; Speak's 1, se nw 33-18-4, dr 3840 ft. Haley's Quair 1, sw se 33-18-3, dr 2535 ft. Slick's Berry 1, sw se 28-17-1, ur 5 in. 4890 ft. 2800 ft oih; Signs 1, nw se 20-17-1, dr 3500 ft. BuViBar's Kirkpatrick 1, c sw 12-15-1, fsh 3492 ft.

MAJOR COUNTY—Randon's Parker 1, ne nw 4-23-16, sd 1150 ft.

OKLAHOMA COUNTY—Cromwell's Walgren 1, c se 21-14-3, dr 3250 ft. Slick et al's Lufkin 1, c ne se 18-13-3, td 3750 ft, rig down. Cromwell's Stone 1, c sw 28-12-4, dr 3935 ft. Ramsey's Dalton 1, c se ne 28-11-5, dr 1000 ft. Bailey & Ramsey's Gluddoracy 1, c se se 9-11-1, dr 4100 ft.

PITTSBURG COUNTY—J. L. Patterson's Smith 1, ne sw se 32-9-16, ¶2/3, sand 4520-31 ft, lost hole td 4480 ft, plugged to top.

PAWNEE COUNTY—Blackwell's Phyfe 1, ne sw ne 5-20-6e, dr 3604 ft in sand, show water.

POTTAWATOMIE COUNTY—Shaffer et al's Ives 1, ne se se 12-10-3, sd 3620 ft. I. T. I. O.'s School 1, se sw 16-8-5, t h l 4080 ft, td 4097 ft, sd. Mid-Kansas' Brandenburg 1, ne sw sw 34-8-4, dr 4065 ft, caving. Sinclair's Bowers 1, nw se 7-7-5, td 4162 ft, show oil, ur 6 in. Roxana's Rock 1, nw nw 22-7-2, ts 3943, dr 3957, hfw. Magnolia's School 1, sw se 36-7-3, dr 1280 ft. Davis et al's McCarthy 1, ne sw 2-9-2, lcn. Magnolia's Wilson 1, se sw se 13-7-3, rur rig.

PONTOTOC COUNTY—Shaw et al's No. 1, ne sw 33-5-6, fsh 1970 ft.. Slick's Graham 1, sw se 21-5-6, show oil 1385-1400 ft, dr 1575 ft. American Oil's Wray 1, c s l se se 27-5-6, rot rig and tools; Phillips 1, c sw ne 34-5-6, dr 1480 ft; Logsdon 1, c ne sw 35-5-6, dr 1205 ft. Bowles et al's Lewis 1, c se sw 29-5-5, sp and sd. La. O. & R. Co.'s Gilcrease 1, ne nw ne 20-5-8, cmt 8¼ 2437 ft, sand 2442-50, sd.

TEXAS COUNTY—Three Way Oil's Price 1, se nw 11-1-18, show gas 2560-2620 ft, sd cas. Connell et al's Tansey 1, se nw 5-1-19, sp and sd. H & H Oil's Hitch 1, ne 26-1-15, dr 460 ft.

TILLMAN COUNTY — Oasis Drlg. Co.'s Snelly 1, se 13-1-18, sd 1525 ft. Pearson's Mounts 1, sw 3-5-15, lcn.

WOODWARD COUNTY—Ostot Dev. Co.'s Simmons 1, se 32-24-17, sd 10 in. 1500 ft. Sharon Oil's Elmore 1, sw 25-21-21, sd 2778 ft.

WOODS COUNTY—Sonner State's Marcum 1, c sw 20-27-15, rig up.

KANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Powell, et al's Stone 1, ne sw 25-24-7	*	2743
LYON COUNTY—		
Culp et al's Bibermyerl 1, sw se 25-19-10	*	2163

BARBER COUNTY—Vicker et al's Ott 1, sw se 30-32-14, dr 4700 ft.

BARTON COUNTY—Huffin et al's Smith 1, ne se se 17-19-11, fsh 5090 ft. Johnson et al's Craft 1, ne sw sw 9-16-15, fsh 3317 ft. Phillips' Boyle 1, c se 25-17-15, fsh 3210 ft.

BUTLER COUNTY—Burford et al's Lambert 1, sw se sw 20-25-7, sd 2775 ft, hfw. Hawarth et al's Clayton 1, sw sw 23-25-6, dr 400 ft. Christy et al's, Harris 1, sw se 14-27-7, ts 2672-2716, 700 ft oih. Helmerick & Paynes, Doran 1, ne sw 1-29-3, dr 2000 ft.

ELLIS COUNTY—R. E. Day's Robbins 1, sw ne ne 14-14-16, dr 2105 ft. Mid-West's Reidell 1, nw sw se 27-13-6, dr 2735 ft.

LYON COUNTY—Gasheetal's, French 1, nw sw 26-21-12, machine. Parkening et al's Burenweide 1, ne se 30-21-11, rig.

MARION COUNTY—Phillips' No. 1, se ne ne 7-15-4. Show Bros.' Williams 1, c ne sw 4-17-14, sd 400 ft. Frank et al's Buckley 1, se sw 18-19-4, rig.

McPHERSON COUNTY—McLaughlin et al's Kuns 1, se nw 12-19-3, ur 3235 ft. Laughlin et al's Ross 1, se 30-21-5, ur 2506 ft.

SEDGEWICK COUNTY—Marland's Schultz 1, nw sw sw 5-28-1, dr 2215 ft.

SEWARD COUNTY—Wilson et al's Son 1, ne 14-33-33, sd 1519 ft. Vicker's Hitch 1, c sw 33-32-34, dr 3509 ft.

SUMMER COUNTY—Ray Ostol's Bartlow 1, se se se 22-33-3w, sd 1600 ft.

GREENWOOD COUNTY — Ward & McGinnis, Ferguson 1, sw 4-27-11, rigging. Empire's Demler 1, nw ne 25-22-12, rigging.

MOUNTAIN STATES

WYOMING

BIG HORN—R. H. Jackson et al's 1, east of Basin, lcn. Producers & Refiners Corp.'s A, 24-56-89, fsh tools at 2640 ft. Carter's Nowood Dome 1, sw 5-48-90, std cmt 1834 ft.

CARBON COUNTY—Producers & Refiners' Medicine Bow 1, 25-21-79, sd after shot at 4050 ft; Wyana 1, 25-26-88, dr at 3100 ft. M. L. Lundy et al's Rock River 1, 34-20-78, plug at 4078 ft for water shutoff.

CONVERSE COUNTY — John Ackard's McKinley 2, 28-31n-69w, abn at 2165 ft. Oil Well Synd.'s Poison Lake 1, 17-31-71w, rig. Criterion Oil Co.'s Irvine 1, ne 5-31-70, dr 3200 ft.

FREMONT COUNTY—Producers & Refiners' Muskrat 1, 34-34-92, rig. Union of California's Carter 1, ne 15-5-1, sd 4365 ft.

HOT SPRINGS COUNTY—Producers & Refiners' Murphy Dome 1, 8-43-91, cmt to dr by lost bit 3012 ft. Union of California's State 1A, nw 34-43-91, sd 4400 ft; Burnham 1A, ne 28-43-91, sd 2700 ft.

JOHNSON COUNTY—Fairway Oil Co.'s Crazy Woman 1, 7-47-82, dr below 1400 ft. Carter Oil Co.'s Rider 2, se 17-48-82, dr up tubing 4398 ft.

PARK COUNTY — Producers & Refiners' Pitchfork 1, ne 14-48-102w, lcn. Union of California's Taylor 1, nw 22-47-101, redr at 950 ft. Ohio Oil Co.'s Guiterman 1, sw 21-53-101 ft, hauling material for a test.

PLATTE COUNTY—Jacobs Synd.'s Grayrocks 1, 13-25n-66w, dr at 1500 ft.

WASHAKIE COUNTY—Producers & Refiners' 1 Tensleep, 13-46-89, rig.

MONTANA

FERGUS COUNTY — Montana-Major Oil Co.'s Valentine 1, dr below 110 ft.

CARBON COUNTY—Ohio Oil Co.'s Dry Creek 1, 11-7s-21e, rig.

LIBERTY COUNTY—Sunburst Oil & Ref. Co.'s Ritter 2, Bear's Den, sw 7-36n-6e, dr be-1815 ft where ¶15 encountered. Mid-Rocky Development Co.'s Federal Land Bank 1, nw 7-33n-7e, dr below 400 ft.

PONDERA COUNTY — Julian Petroleum Corp.'s Pondera Dome 1, se 17-27n-4w, sd at 1950 ft.

ROSEBUD COUNTY—Ralph Arnold et al's Valentine 1, survey completed.

STILLWATER COUNTY—Prairie O. & G. Co.'s Dave Williams 1, 23-3-21, dr at 2540 ft.

TOOLE COUNTY— Zenith Oil & Gas Co., Pederson 1, se 21-35n-1e, dr at 1870 ft. Kevin-Flathead Oil Co.'s Toole 1, ne 27-36n-1e, rig. Prairie Oil & Gas Co.'s Hunter 1, 13-33-2, fsh for bailer at 1500 ft. S. Hart Green Synd.'s Lerum 1, sw 11-37n-2w, dr in oil.

NEW MEXICO

CURRY COUNTY—W. D. Weathers et al, Weathers 1, 7-25-24, dr below 1127 ft. Hasson Pet. Co.'s Laird 1, 22-8-36, sp and sd.

DE BACA COUNTY—McAdoo Pet.'s State 1, 16-1-27, dr at 2535 ft.

McKINLEY COUNTY—H. L. Williams 1, 30-18-8, dr below 360 ft. Producers & Refiners' 1, 25-13-9, lcn. Childers Drilling Co.'s 2, 19-18-10, dr at 285 ft. Midwest's L. Hancock 1 1-17-9, ur 1769 ft; Espe 1, 2-17-19, dr 1065 ft. Pittsburgh Dev. Co.'s Cathedral Rocks 1, 30-20-10, sd 3275 ft in oil and hot water.

SAN JUAN COUNTY—Mid-Continent Oil Co.'s Ranson 1, 22-29-11, sp 50 ft. San Juan Pet. Co.'s Palmer 1, 17-29-13, making water shutoff at 1290 ft. R. M. Smith's James 2, 23-29-11, ready to sp. Craft-Wiley's Shuetz, 15-29-11, dr below 300 ft. Kane Bros.' Finch 1, 15-29-11, bldg rig. Huerfano Pet. Corp.'s 1, 25-29-11, rigging Star rig to Mesa Verde sand. Union Oil & Mining Co.'s Pine E, 8-29-9, fsh job completed. Senate Oil Co.'s Garland 1, 34-29-11, resuming dr 1735 ft. T. N. C. Oil Co.'s Lanier 1, 9-29-11, setting 8¼ in 400 ft. Kansas-Colorado Oil Co.'s Atterberry 1, 24-31-11, erecting standard rig to drill deeper from 1350 ft. Portage Oil & Gas Co.'s Glade 1, 24-30-13, dr deeper 2160 ft.

TORRANCE COUNTY—San Juan Oil & Gas Co.'s Minerman 1, 32-7-10, moving ma-

(Continued on page 70)

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: '—dry hole, abandoned well; ‡salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

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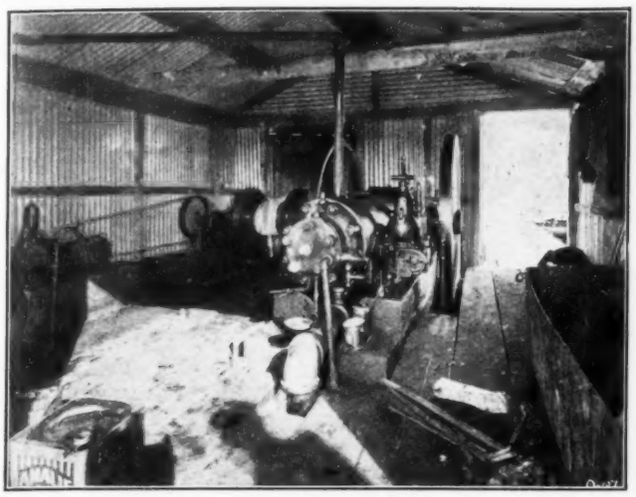

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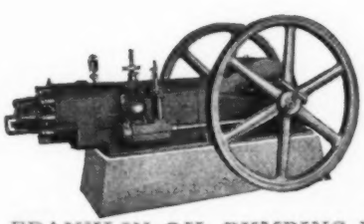
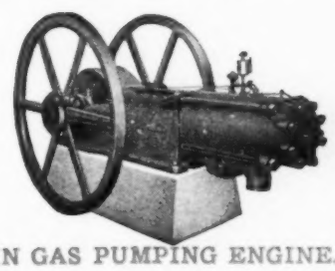


FRANKLIN OIL PUMPING ENGINE.



FRANKLIN GAS PUMPING ENGINE.

FRANKLIN

VALVELESS ENGINES

PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

CAT CANYON — Palmer-Union Oil Co., Stendel 12-A, 3-9-32.

HUNTINGTON BEACH—J. E. Hall, No. 2, 10-6-11. Superior Oil Co., Ruby Jones 1, 10-6-11; Groves 1, 10-6-11; Berry 1, 10-6-11. Merritt Annex Oil Co., Lindner 1, 27-5-11.

LOS ANGELES COUNTY—D. H. Thomason & James McCoy, No. 1, 27-5-16. Standard, Marblehead 1, 36-1-15.

MIDWAY—Midway Peerless Oil Co., No. 3-X, 15-31-22.

PIRU—Santa Fe Pet. Co., Fleisher 1, 17-4-8.

SANTA BARBARA COUNTY—Berry Oil Co., Cavalletto 1, 1-4-29. Graham-Loftus Oil Co., No. 1, 36-5-31.

SEAL BEACH—Geo. F. Getty, Inc., Seal Beach 14, 3-5-12.

TORRANCE—C. C. M. O., Del Amo 71, 17-4-14.

OKLAHOMA

BECKHAM COUNTY—Prince Borthers et al, 1, c sw nw 5-8n-23w.

CADDO COUNTY—Cole-Lafayette Oil., McKenna 2, nwc sw ne 5-5n-9w.

CREEK COUNTY—J. R. Cole, Strip 1, ne sw se se 13-17-10e. Pontiac Oil., Fulsom 3, sec nw sw 13-17-10e. F. C. Adams, et al, Wiley 1, c s l nw sw 20-17-10e. Silurian Oil., Starr 24, sw se ne 17-18-7e.

GRADY COUNTY—B. Nichols, Dryden 3, sw se 35-5n-8w. Carter O., Walford 5, sw se 16-3n-5w.

KAY COUNTY—Marland, Chambers 2, se nw se 9-25-2w. Gypsy, Chambers 2, se sw ne 9-25-2w. Carter et al, Chambers 1, nw ne se 9-25-2w. Comar Oil et al, Garrett 1¼, nw se 31-27-2e. Blackwell Oil & Gas, Baldwin 1, se nw 32-27-1e. National Oil & Ref., Buessing "A" 1, ne sw sw nw 21-27-1e. Comar, Horne 2½, ne nw 8-28-1w.

MUSKOGEE COUNTY—F. E. Webb et al, D. Asbury 5, se ne sw ne 20-16-15e. J. M. Foltz, W. McWeen 1, c w l sw ne 27-15-17e. D. C. Lampton, T. Carlina 2, sw nw sw 9-15-18e. W. J. Metzer, Crittendon 4, ne se ne se 6-14-19e. H. L. Jolly, Ross 1, sw nw se 9-14-19e.

OKFUSKEE COUNTY — Burk Greis Oil, Brun 2, sw 15-10-9e.

OKMULGEE COUNTY — Hutchinson & Becker, N. Thompson 1, nw ne ne 27-11-13e. W. B. Pine, D. Harrison 5, se ne se nw 19-15-14e. A. Lebeene et al, Lee 5, c w l se ne 22-15-11e.

OSAGE COUNTY—Phillips Pet., 7, nw se sw 7-27-6e. Gypsy, 6, nw ne se 28-27-6e.

PAWNEE COUNTY—Abict Drilling Co. et al, Zickfoose 1, nw ne ne 34-20-9e.

PAYNE COUNTY—Pure, Axtell 2, nw sw sw 8-18-4e; Axtell 1, sw nw sw 8-18-4e.

PONTOTOC COUNTY—American Oil & Ref., Wray 1, c s l se se 27-5n-6e.

POTTAWATOMIE COUNTY — Magnolia, Wilson 1, se sw se 13-7n-3e; White 1, ne sw 25-7n-3e.

SEMINOLE COUNTY—Barnsdall, S. Pack 1A, ne se se 10-9-5e. Magnolia, H. Sullivan 1, nw 12-9-5e; H. Sullivan 2, sw nw nw 12-9-5e; H. Sullivan 3, se nw nw 12-9-5. I. T. I. O., Bowlegs 9, sw ne 22-8-6e. Gypsy, Bowlegs 2, nw se 22-8-6e. Sinclair, L. Jones 4, nw sw 11-8-6e; L. Jones 3, sw ne sw 11-8-6e; L. Jones 2, se nw sw 11-8-6e. Tidal, Harjoche 4, sw nw sw 10-8-6. Magnolia, Cumsey 1, se ne 10-8-6e. Gypsy, Cumsey 3, ne se 10-8-6. Sinclair, C. Jones 4, sw se se 9-8-6.

STEPHENS COUNTY — Harry Hanbury, Taliaferro 5, sw nw nw sw 27-1s-8w. Magnolia, Aldridge 1, nw se se 15-1s-4w.

TULSA COUNTY—F. Hilt et al, Oswalt 3A, c sw nw 6-17-13e.

WAGONER COUNTY—George S. Wilson, Watson 2, nw se sw ne 11-16-16e.

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week Ending June 3	Previous Week	Total This Month	Total This Year	This Week Last Year	This Month 1926	Total Same Date 1926	Year Total 1926
Arkansas	5	7	17	182	17	17	593	910
California	14	20	61	701	16	16	761	1,293
Louisiana	11	18	47	299	30	30	591	1,318
Kansas	15	14	42	502	57	57	954	1,745
Oklahoma	49	65	183	1,977	107	107	2,610	5,165
Texas	148	179	504	4,855	265	265	5,315	12,158
Mt. States	..	3	7	285	35	35	137	....
Total	242	306	861	8,801	527	527	10,961	*22,589

*Does not include Mt. States.

KANSAS

BUTLER COUNTY—Schwartz et al, Hazlett 1, sw se nw 19-25-5e. Phillips Pet., Sarah 2, se ne 4-27-6e. Patton et al, Shriver 4, se sw se 33-27-6. Magnolia, Shriver 3, se 34-27-6e; Blakeman 6, nw ne ne 4-28-6e.

CHAUTAUQUA COUNTY—Griffin, Bell et al, Oliver 4, c nw sw 1-32-10e.

COFFEY COUNTY—Gasche et al, Flaherty 1, sw nw nw 26-22-12e.

COWLEY COUNTY—Trees Oil Co., Titsworth 1, se nw 30-30-3e. Carter, Baird 1, se sw ne 17-32-3e.

GERRY COUNTY—Manhattan Oil Corp., Foster 1, sw ne nw 26-13-5e.

GREENWOOD COUNTY—Empire, Demler 1, nw ne 25-22-12e. York State Oil, Patterson 2, ne sw nw 36-23-11e. McGinnis et al, Ferguson 1, se sw 4-27-11e.

LYON COUNTY—Gasche et al, French 1, nw sw 26-21-12e.

MARION COUNTY — Frank Propp et al, Buckley 1, se sw 18-19-4e.

LOUISIANA

ACADIA PARISH—Texas Co., Shreveport, Latrielle B 3, 47-9s-2w, 2600 ft s along w line from nw cor, 950 ft e at right angle.

CADDO PARISH—Bayou State Oil Corp., Shreveport, Hoss Heirs 30, 24-22n-15w, 600 ft s and 320 ft e of nw cor ne sw. Louisiana Refrigerated Products Corp., Shreveport, Fee 4, 2-17n-14w, 330 ft n of sw se. Standard Oil Co., Shreveport, Mrs. L. H. Trosper 34-18n-16w, 1059 ft n and 997 ft w of se cor. (Changed Location) Standard Oil Co. of La, Shreveport, W. P. Stiles, et al 186, 33-21n-16w, 261 ft n and 775 ft w of se cor sw.

CALCASIEU PARISH — Gulf Ref. Co., Houston, Bright-Penn 42, 28-9s-11w, apprx 360 ft s and 33 ft w of ne cor nw ne. Hercules Oil Co., Vinton, Parafine 2, 28-9s-11w, 75 ft s and 80 ft e of nw c ne of ne .

SABINE PARISH—L. M. Emlet, Zwolle, Bowman-Hicks, 14-7n-14w, 420 ft n and 274 ft e of sw c sw se.

WEBSTER PARISH — W. T. Hunt, et al, Shreveport, Bisteneau-Webster Oil Co. 1, 35-18n-10w, 200 ft s and 200 ft e of nw c ne.

WEST CARROLL PARISH—Phillips Petroleum Co., El Dorado, W. R. Marion 1, 32-20n-9e, 450 ft s and 200 ft e of nw c nw sw.

WINN PARISH—H. M. Roark, El Dorado, Southern Mineral Co. 2, 19-11n-3w, 1000 ft n and 1420 ft e of sw c.

ARKANSAS

OUACHITA COUNTY—Exchange Oil Co., Berg 4, 4-16-15, 150 ft s and 150 ft w of ne cor of lot 2, ne; Berg 8, 4-16-15, c nw ne.

UNION COUNTY—Gulf Ref. Co., H. Murphy 45, 4-16-15, 464 ft n and 100 ft w of se cor. E. M. Jones, Lawton 2-A, 10-16-15, sw cor. E. M. Jones, Murphy 10, 17-16-15, 150 ft s and 70 ft w of ne nw ne.

TEXAS

ARCHER COUNTY — Magnolia, Dallas, Kolls 2, L. Walker sur, 400 ft s of center of n line. F. P. Rose, Wichita Falls, Wilson 1, blk 116, Amer Trib sur, 150 ft to n and w lines.

ARMSTRONG COUNTY—Frank Meadows et al, Wetumka, Okla., Harrold 1, S 100, blk G1, A&G sur, 330 ft to s and w lines.

BROWN COUNTY — Triangle Oil Co., Brownwood, Eeds 5, J. Day sur, J. H. Fulcher, Eastland, Clark 1, blk 16, K. C. S. L. sur, 150 ft to n and 350 ft to w line; Clark 1, blk 16, K. C. S. L. sur, 150 ft to n and e lines. A. T. Russell, Brownwood, Oden 3, O. Hudson sur, 600 ft to n and 300 ft to w line. Root & Rhodes, Eastland, Pugh 5, C. J. Pugh sur, 600 ft n of 3. Harold Bucher, Coleman, McChristy 1, S70, blk 21, 2050 ft to s and 300 ft to w line. John Fulcher, Eastland, Lesley 1, S 36, H&TC sur, 150 ft to n and e lines. Clayton Ryan, Brownwood, Brooks 3, J. Hernandez sur, se corner. Gibson Oil Co., Amarillo, Shore 7, J. C. Ryan sur, 750 ft to n and 150 ft to w line; 8, 300 ft s of 7; 9, 300 ft s of 8; 6, 450 ft to n and 150 ft to w line. H. D. Creath, Wichita Falls, Perry 1, J. Kinney sur, se corner. Texas Co., Cisco, Lowe 84, J. Stubblefield sur.

BELL COUNTY—Petoskey Oil Co., Belton, Kools 2, L. Walker sur, 400 ft s of center of n line.

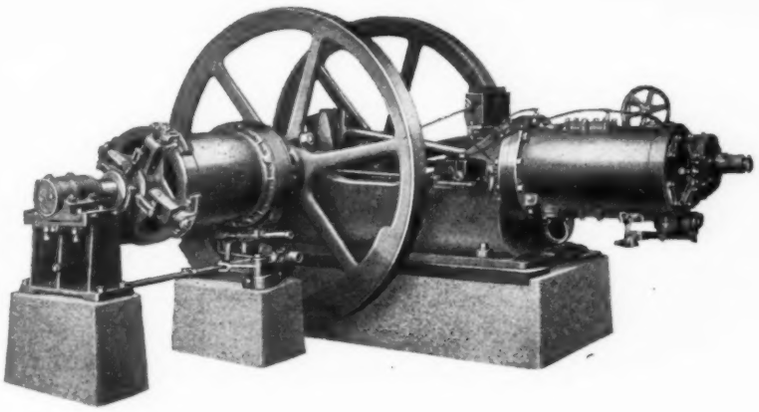
BEXAR COUNTY—G. E. Ginter, San Antonio, Gayle 1, C. A. Yoakum sur, 2750 ft to n and 150 ft to e line.

BROOKS COUNTY—Texas Co., Houston, Lasater 2, P. Benavides sur, 1300 ft w of 1.

CALLAHAN COUNTY—House & Cheney, Cisco, Wylie 1A, 2040, TE&L sur, 1200 ft to n and 150 ft to e line; 2A, 300 ft w of 1. Valley Oil Co., Wichita Falls, Hickman 35, S 31, D&D sur, 300 ft w of 34; H. H. Ramsey 3, S 31, D&D sur, 600 ft e of 1. Mortimer, Hobbs & Ferguson, Abilene, Beasley 6, S 41, D&D Asy sur, 480 ft to w and 500 ft to s line. White Eagle Oil & Refining Co., Wichita, Kan., Hall 1, S 1, T&P sur, center. Cisco Oil Co., Cisco, Warren 15, 2971, TE&L sur, 200 ft sw of 9; Parks 13, 2972, TE&L sur, 168 ft se of 11. Moutray Oil Co., Abilene, Hickman 5, S 149, BBB&C sur, 1425 ft to e and 150 ft to n.

COLEMAN COUNTY—Amerada Petroleum Corp., Cisco, Harris S 9, J. Sanders sur, 1 of 1333; 134, 440 ft n of 129. C. L. Mount, Cisco, Kelly 1, S 496, blk 7, W. C. S. L. sur, ne corner. Amerada Petroleum Corp., Cisco, Harris S 9, J. Sanders sur, 440 ft e of 96; 132, 4408 fe w of 129. H. G. Gwinnup, Fort Worth, Morris 1, No. 269, R. Cochran sur, 227 ft to n and 248 ft to e line.

COOKE COUNTY — Stroube & Stroube, Corsicana, Koelzer 1A, T. Scott sur, 150 ft to s and e lines; 2A, 300 ft w of 1A. Kewanee Oil & Gas Co., Tulsa. Dennis 2, T. J. Hutchinson sur, 300 ft s of 1. Oil Operator's Trust, Fort Worth, Luke 5, blk 89, T. Scott sur, 322 ft w of 2; J. Kleiss 5, blk 62, J. W. Littleton sur, 150 ft to n and w lines.



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Manila Cordage, Bull Ropes and Cat Lines.

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Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

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"Camel Hair" Belting, Belt Clamps.

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SUPPLY CO.

Tulsa, Okla., Pittsburgh, Pa.

East of the Mississippi—The Frick & Lindsay Co.

WEST OF THE MISSISSIPPI — STORES EVERYWHERE

Vacuum Oil Co., Houston, Beckleman 1, blk 17, E. C. S. L. sur, 1030 ft to n and 300 ft to e line. B. J. Chronic, Gainesville, Kelly 1, MEP&P sur, 307 vs to e and 245 vs to s line.

CRANE COUNTY—Humble Oil & Ref. Co., Houston, University 11, S 38, blk 30, Univ. Lands sur, 660 ft e of 9. Magnolia Pet. Co., Dallas, O'Keefe 10, S 38, blk 30, Univ. Lands sur, 660 ft s of 10; Lassiter 4, S 34, 330 ft to n and e lines; Hendricks 9, S 46, 660 ft s of 4. Prairie Oil & Gas Co., Ranger, Lassater 2, S 47, blk 30, Univ. Lands sur 660 ft s of 1. Landreth Prod. Corp., Breckenridge, Cowden 5, blk 10, J. C. sur, 200 ft to n and 330 ft to e line; 6, e central. Gulf Prod. Co., Fort Worth, Waddell 2, S 10, blk B25, School sur, 330 ft to n and e lines.

CLAY COUNTY—Oscar L. Soules, Burkburnett, Landrum 2, blk 5, P. C. S. L. sur, 300 ft ne of 1.

CALDWELL COUNTY—Magnolia Pet. Co., Dallas, Tiller 10, J. Henry sur, 400 ft sw of 1. E. F. Smith, Austin, San Marcos River 5, n of 4.

EASTLAND—J. E. Lewis & Co., Eastland, Hargus 2, S 3, E. T. Ry. sur, 150 ft to n and e lines. Wm. Lorenzen, Cisco, Qualls 4, 3190, TE&&L sur, 150 ft to n and 310 to e line. L. H. Wentz, Eastland, Stuteville 1, S 12, blk 3, H&TC sur, 1320 ft to s and 150 ft to e line.

FORT BEND COUNTY—Gulf Prod. Co., Houston, Moore 12, J. Frazier sur, 1500 ft s of 11.

GRAY COUNTY — Gulf Prod. Co., Fort Worth, Bowers A 1, S 89, blk B2, H&GN sur, 330 ft to s and w lines. Roxana Pet. Corp., South Bend, Coombs & Worley 1, S 39, blk 3, I&GN sur, 330 ft to n and e lines.

GRAYSON COUNTY—C. A. Tucker, Dallas, Handy-Thorn 1, S. Stewart sur, 1100 ft to w and 2100 ft to s line.

HARRIS COUNTY—Atlas Oil Corp., Humble, Fondren 22, Jas. Strange sur, n of 15. Humble Oil & Ref. Co., Houston, Simms-Smith 72, Wm. Scott sur, 1069 ft to w and 295 ft to n line.

HUTCHINSON COUNTY—Bean & Metzger, Amarillo, Cockrell 1, S 3, blk 23, B&SF sur, 225 ft to e and 285 ft to s line. Roxana Pet. Corp., South Bend, Cockrell 1, blk B3, S 3, D&SE sur, 220 ft to s and 330 ft to w line. Phillips Pet. Corp., Bartlesville, Whittenburg 12, S 71, blk 46, H&TC sur, 655 ft s of 9.

HIDALGO COUNTY—Queen City Oil & Gas Co., Mercedes, Sapisallo 1, lt 1, blk 82, s central.

HARRISON COUNTY—State Line Oil & Gas Co., Shreveport, La., George 1, E. Little sur, 600 ft to w and 560 ft to s line. Taylor 2, 811, T. D. Wilson sur, se corner.

HARDIN COUNTY—Texas Co., Houston, Sterling 1, F. H. Green sur, 1200 ft to ne and 550 ft to se cor.

JEFFERSON COUNTY — Sun Oil Co., Beaumont, McLean 15, J. Douthitt sur, 126 ft ne of 12. Yount-Lee Oil Co., Beaumont, McFaddin 35, blk 1, P. Humphreys sur, 285 ft to n and 1078 ft to e line; Fee 26, blk 5 J. Douthitt sur 55 ft to s and 122 ft to w line. Gulf Prod. Co., Houston, Oakwood 12, P. Humphreys sur, 228 ft to n and 40 ft to e line. Magnolia Pet. Co., Dallas, Gladys 6, e of 5.

JACK COUNTY—Shaw & Rathke, Wichita Falls, Cullers 1, S 4, S. P. Ry. sur, 250 ft to n and 180 ft to e line.

KNOX COUNTY — Deep Rock Oil Co., Fort Worth, Moore 1, S 1, blk 6, GC&SF sur, 475 vs to n and w lines.

KLEBERG COUNTY—Humble Oil & Ref. Co., Houston, Kleberg 4, S 40, KT&I sur, 660 ft to e and 810 ft to s line; Gulf-Dennett 1, S 38, KT&I sur, 50 ft to n and 631 ft to e line.

LIBERTY COUNTY—Union Sulphur Co., Sulphur, La. Schindler 2, R. Pruett sur, 1300 ft to s an d200 ft to w line. Liberty Bell Oil Co., Beaumont, Ager 1, B. Franklin sur, nw corner.

LAMPASAS COUNTY—Vandersypt, Upton & Rahl, Goldthwaite, Smith 1, D. W. Biggs sur, 160 ft to n and e lines.

MONTAGUE COUNTY — Olean Pet. Co., Bristow, Okla., Smith 1, blk 96, K. C. S. L. sur, 200 ft to n and w lines. E. W. Skinner Oil Co., Noconoa, Maddox 2, J. Chambliss sur, 300 ft se of 1.

McCULLOUGH COUNTY—Haby & Allison, Menard, Haby 1, S 138, G. Volman sur, 302 ft to n and 263 ft to e line.

MILAM COUNTY—W. A. Jones, Minerva, Smith 1, T. J. Chambers sur, 150 ft to ne and 810 ft to se line.

NAVARRO COUNTY — H. S. Protheroe, Dallas, Settle 2, 182 ft sw of 1.

NUECES COUNTY—W. L. Pearson, Corpus Christi, Weil 1, n central.

PECOS COUNTY — World Oil Co., Fort Worth, Robertson 1, S 28, blk 10, H&GN sur, 330 ft to n and e lines. Red Bank Oil Co., Tulsa, McKenzie 1, S 21, blk 126, S T & L sur, n central.

REFUGIO COUNTY—Coast Gas Co., San Antonio, Lambert 6, sw corner; 7, e central. W. F. Morgan, Inc., San Antonio, Ryals 1, Refugio sur, e central; Lambert 2, blk 8, 660 ft to n and e lines.

SHACKLEFORD COUNTY — Texas Co., Wichita Falls, Roche 4, S 68, Univ. Lands sur, 150 ft to w and 256 ft to s line. Jameson & Terry, Moran, Brazzell 1, s 55, Blind Asy sur, 150 ft to e and 450 ft to s line. Amerada Pet. Corp., Cisco, Davis 4, S 29, blk 13, T&P sur, 150 ft to s and e lines. Cady Oil Co., Moran, Humbert 2, S 21, Bayland Asy sur, 750 ft n of 1. Mid-Tex Pet. Co., Oklahoma City, Okla. Newell 1, blk 2, GH&H sur, 900 ft to n and 1200 ft to w line. Magnolia Pet. Co., Dallas, Fee 1, S 20, Univ. Lands, ne corner. Alex Sommer & Son, Moran, Grothe 1, 566, TE&L sur, 450 ft to e and 150 ft to s lines; 2, 450 ft to n and e line. H. G. Gwinnup, Fort Worth, Green 1, S 65, blk 12, T&P sur, 660 ft to s and e lines. Meridith & Grant, Moran, Wild 6, S 15, Univ. Lands 150 ft to w and 450 ft to s line; 1, 150 ft to s and w lines; Webb 2, S 67-68 Univ Lands sur, 300 ft w of 1; 1, 150 ft to n and 450 ft to w line. C. L. Water-

MacCLATCHIE

Automatic Pump Piston

PATENT PENDING

LOW FIRST COST LOWEST UPKEEP

MADE IN ALL SIZES

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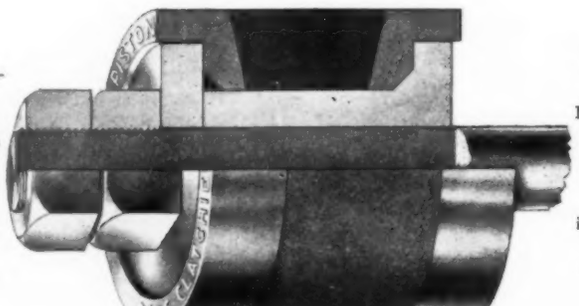
ALL MAKES OF PUMPS

This Automatic Expanding Piston Will Make Your Liners Wear Longer They Will Pump More Fluid and Save You Money



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By Renewing the Outside Rings and Rubber the Piston is as good as New at ⅓ the Original Cost

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The pressure coming in contact with the ends of the outside rings pushes them back against the rubber expanding same.

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Manufactured and Sold by

MacCLATCHIE MANUFACTURING CO.

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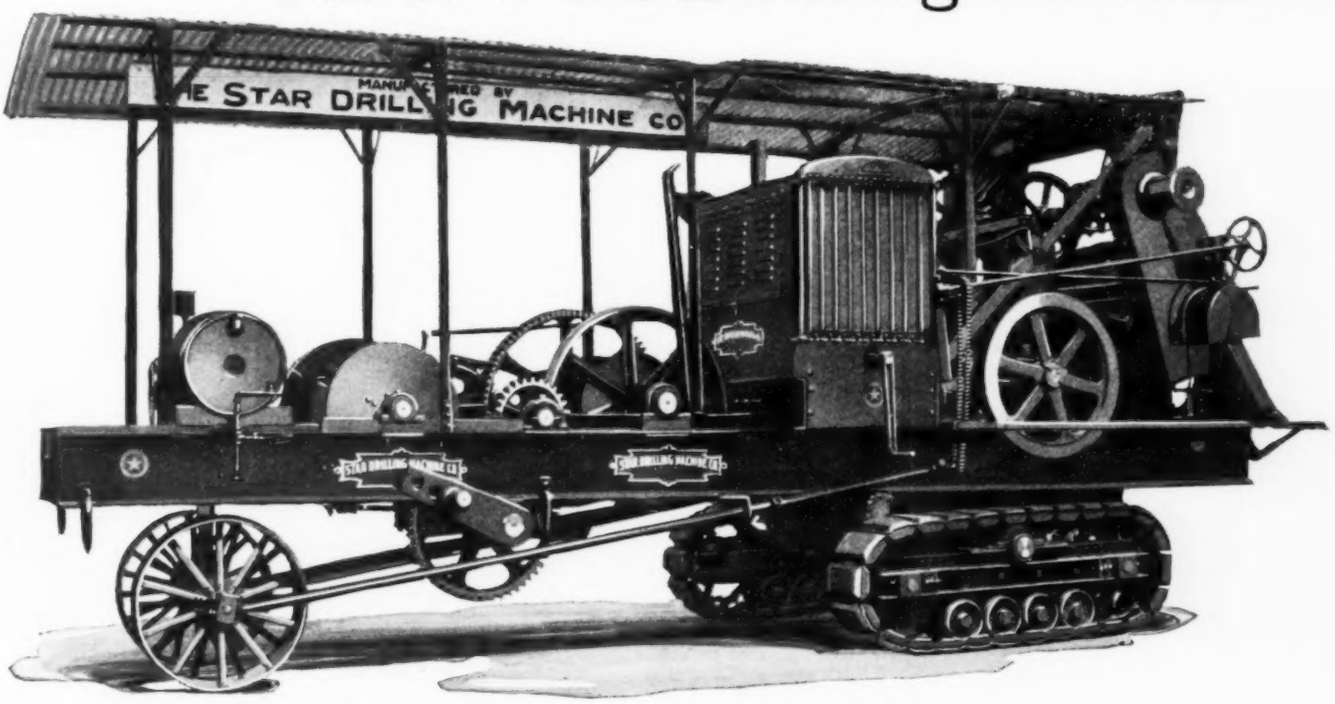
or at your supply house

Here It Is—

Star builds first Portable Combination Rotary and Cable Tool Drilling Machine



WE take pride in announcing this new member of the Star family. It is a machine that the steam driller will feel right at home on as it closely follows steam methods . . . . . levers identical with standard rotary . . . . . reverse operated without shock.

The Star Combination Rotary and Cable Tool Drilling Machine has a 100 H. P. 4-cylinder engine that will drill to 2500 feet. Besides the advantage of being a combination rotary and cable tool machine, it offers three main reasons for drilling economy—(1) Moves under its own power on tractor wheels. (2) You can back it up to a standard derrick, set end of frame on sill and start threading your blocks. (3) Uses either natural gas or gasoline.

This new Star is being introduced after two years testing in the fields. If desired it can be furnished without cable tool attachment.

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Akron, Ohio.

Please send us complete information on the new Star Combination Rotary and Cable Tool Drilling Machine.

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City..... State.....

OIL WEEKLY

baugh, Fort Worth, Blanch 1, 512, TE&L sur, 150 ft to n and e lines. T. G. Shaw, Burjett, Broadfoot 5, S 20, Bayland sur, s central. Murphy & Gibson, Albany, J. B. Mathews 1, S 58, E. T. Ry. sur, 450 ft to e and 150 ft to s line.

SAN PATRICIO COUNTY—W. L. Pearson, Corpus Christi, Moore 1, blk 3, Roos sur, 750 ft nw of B 3.

SMITH COUNTY — H. D. Dickey, Fort Worth, Parker 1, S 36, se corner.

STEPHENS COUNTY—W. S. Clough, Moran, Compton 2, S 40, blk 7, T&P sur, 300 ft to n and 150 ft to w line.

SCHLEICHER COUNTY—General Securities Co., Dallas, J. A. Whitten 1, S 35, blk LL, H&TC sur, center.

THROCKMORTON COUNTY—Falls Prod. Co., Wichita Falls, M. K. Graham 3, 992, TE&L sur, 300 ft e of 2.

TAYLOR COUNTY — Gilbert & Johnson Co., Farmer 1, blk 6, No. 1, T&P sur, center.

UPTON COUNTY — Tidal Oil Co., Fort Worth, Burleson 1, S 3, GC&SF sur, 225 ft to n and 330 ft to e line. Gulf Prod. Co., Fort Worth, Hughes B1, Wm. Teer sur, 330 ft to s and e lines.

WICHITA COUNTY—Consolidated & Apple-Brandeberry Oil Co., Wichita Falls, Ancell 3, S 11, blk 7, H&TC sur, 300 ft s of 2. Sanford & Crowel et al, Wichita Falls, Hamilton 1, L. C. Gibbs sur, 150 ft to s and w lines. Texas Co., Wichita Falls, Waggoner Bros. 3, blk 28, H. George sur, 150 ft to s and w lines. Archer Oil Co., Wichita Falls, Barton-Lewis 1, blk 20, W. V. F. L. sur, 150 ft to n and 450 ft to e lines. Magnolia Pet. Co., Dallas, Ramming 26, blk 3, C. T. Ry sur, 200 ft to e and 900 ft to s line. Clough, Davis & Gideon, Wichita Falls, Cole 3, blk 10, P. P. C. S. L. sur, 450 ft to n and 150 ft to w line. A. T. Wolfe & Son, Wichita Falls, Nitchke 2, blk 13, D. C. S. L. sur, 1100 ft to n and 150 ft to w line. W. E. Timblin, Wichita Falls, A. F. Dodson 1, W. H. Anderson sur, 130 ft to s and e lines. Keener Oil & Gas Co., Tulsa, Burnett 19, H&TB sur, 300 ft sw of 3. R. R. Clark, WichitaFalls, Coffey 2, blk 11, AB&M sur, 750 ft to n and 150 ft to e line.

WILBARGER COUNTY—Fain-McGaha Oil Corp., Wichita Falls, Waggoner K1, S 11, blk 13, H&TC sur, 150 ft to s and w lines.

WEBB COUNTY—Cole Petroleum Co., Laredo, Benavides 46, No. 412, blk 5, 1301 ft to n and 424 ft to w line.

WHEELER COUNTY—Shamrock Pet. Co., Shamrock, Pakan 1, S 102, blk 23, H&GN sur, 990 ft to w and 150 ft to s line.

WILLIAMSON COUNTY—M. S. Bartlett, Rockdale, Kubieck 1, P. J. Mahon sur, 250 ft to n and 300 ft to e line.

WINKLER COUNTY — Gulf Prod. Co., Fort Worth, Hendrick 7, S 34, blk B5, School Land sur, 660 ft e of 4.

YOUNG COUNTY—Simms Oil Co., Dallas, Kibble 1, G. Dedrick sur, 450 ft to ne and 330 ft to se line. Pemeta Oil Co., Fort Worth, Scott 2, Wm. Johnson sur, s central. C. W. Boller, Wichita Falls, Gregg 4, A. Rohus sur, 300 ft s of 3; 3, 300 ft e of 2. Texas Pacific Coal & Oil Co., Ranger, Donnell 3, 1211, TE&L sur, 330 ft to n and 900 ft to w line. Lee, Tidwell & Dorsey, Wichita Falls, Gray 1, 189, TE&L sur, 150 ft to s and e lines. Panhandle Ref. Co., Wichita Falls, Mathews 10, A. Rohus sur, 300 ft s of 4; 9, 300 ft e of 6. Golding & Cochran, Wichita Falls, Cox 1, blk 18, Y. C. S. L. sur, 150 ft to n and 450 ft to w line.

ZAPATA COUNTY—B & E Synd. & Hill, San Antonio, Burtrang 1, sec 627, 500 ft to nw and 3239 ft to ne line. Roxana Petroleum Corp., Houston, Lopez 1, sec 288, 150 ft to n and e lines. Texas Co., Houston, J. D. Jennings 6, C. Blanco sur, se corner. Magnolia Pet. Co., Dallas, Gonzales-Cuellar 1, J. M. Pereda sur, 150 ft to n and e lines. H. H. Galbraith, Hebbronville, Hirsch 2, S 595, E. Javali sur, 3200 ft to ne and 150 ft to nw line.

WILDCATS

(Continued from page 64)

terial to resume dr 2330 ft; Randall 2, 20-6-10, dr 3400 ft. F. G. Wilson Trustee's Pace 1, 12-6-7, dr 1360 ft.

QUAY COUNTY—Midwest's Rhodes 1, 30-8n-31, dr 3535 ft. Ohio Oil Co.'s Tucumcari 1, 24-7-29, fsh parted pipe at 1538 ft.

UNION COUNTY — Sun State Pet. Co.'s Paso Monte 1, 14-24-30, dr below 2957 ft.

VALENCIA COUNTY — Acme Oil Co.'s New Mexico-Arizona Land Co. 1, 26-6-3, dr below 1667 ft.

NORTH DAKOTA

SLOPE COUNTY — Bull Dog Oil & Gas Co., east of Little Beaver dome, sw of Marmarth, resuming operns at 1215 ft.. Little Beaver Oil & Gas Co., on Little Beaver Dome, bldg new rig. New Hope Gas & Oil Co., 7 miles west of Marmarth, dr below 300 ft.

COLORADO

BOULDER COUNTY — Repollo Oil Co.'s Deines 1, 33-1-70, sd at 4730 wtg for compln of offset. Essok Oil Co.'s Martin 1, 5-1s-70, running 8¼ in. to 4200 ft. Frank E. Kistler Co.'s Gillespir 1, 28-2n-69, sd for repairs 4410 ft.

EL PASO COUNTY — Phillips Pet. Co.'s Niles 1, 27-16-65, dr below 2135 ft.

LAS ANIMAS COUNTY—Mountain States Gasoline Co.'s Sandoval 2, 4-34-62, testing gas flow. Mountain States Gasoline Co.'s Sandoval 3, nw 3-34-62, moving in. Pacific Coast Gasoline Co.'s Union Pacific 1, se 19-33-61, lcn; Cortese 1, 3-34-62, dr at 840 ft; Cortese 2, 3-34-62, dr at 1260 ft. Foley & Goldsworthy's Government 1, 11-30-60, dr below 1535 ft.

LOGAN COUNTY—Northeastern Colorado Oil Co., State 1, 36-8-55, sd for boiler repairs at 3393 ft.

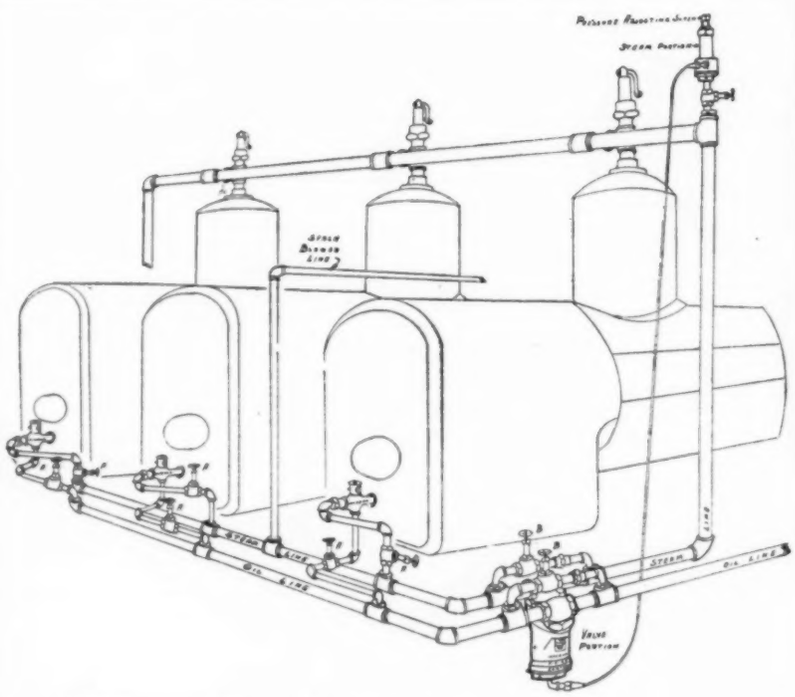
LA PLATA COUNTY—Ohio Oil Co.'s Snyder 1, 11-32-12, abn 3842 ft.

MESA COUNTY — B. C. Morrison's Peerless 1, 23-8-103, dr below 1100 ft.

MOFFATT COUNTY—Marland Oil Co.'s Clark 1, 21-3-91, deepening to Sundance from 2157 ft; Wymore 9A, 16-4-91, sp at 40 ft. This is a joint operation with the Union of California.

ROUTT COUNTY—Ohio Oil Co.'s Kuydendall 1, se 22-2ln-11w, rig.

WELD COUNTY—Platte Valley Petroleum



The Inferno Firing Control

EVERYTHING being equal the Contractor who is the most economical in the consumption of fuel gets to drill the last locations, on footage contracts where fuel is furnished.

Stop fuel waste and boiler popping by installing an Inferno Firing Control. Automatically holds uniform pressure firing with oil or gas, by shutting down fuel supply when desired pressure is reached and turning it on again when needed. Simply select your pressure and set your Control.

We have reports of savings of three to fifteen barrels of oil per day and a corresponding volume of gas on drilling wells.

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NATIONAL PULLING MACHINE

RECOMMENDED FOR PULLING 2500'-2" TUBING AND RODS 750'-13 lb. CASING WHEN STARTED

THE NATIONAL SUPPLY COMPANIES

Co.'s 1, 5-8-56, dr at 250 ft; Patterson 1, 24-6-61, dr below 2890 ft, with showing of oil.

UTAH

GRAND COUNTY—Utah-Southern Oil Co.'s J. H. Shafer 1, 17-27-20, abn at 5862 ft. Midwests's Prommel 1, 5-27-21, ur at 2191 ft. Embar Oil Co.'s Big Six 1, 34-25-21, dr below 3720 ft. Empire Gas & Fuel Co.'s Kimball 1, 6-20-21, ur to lower 6⅝ in 3553 ft.

SAN JUAN COUNTY—Utah Southern Oil Co.'s Noble 1, 28-40-18, dr at 2845 ft; Canyon 1, 28-41-19, recmt. Boulder Knoll Oil & Gas Co. 1, sd at 1950 ft. Utah Petroleum Co.'s Geoghegan 1, 1-30-20, sd at 1640 ft. Francis Oil-Utah Petroleum's Francis 1, 36-41-17, cmt at 1700 ft. Union of California Lisbon 1, straightening crooked hole at 750 ft.

SOUTHERN CALIFORNIA

BOYLE HEIGHTS—Haskell M. Green's 1, dr 1560 ft.

CLAREMONT—Claremont Oil Co.'s 1, sd 1130 ft.

COYOTE-WEST—Bastanchury Ranch Co.'s 1, dr 3222 ft.

DAVIDSON CITY—California Well Drlg. Co.'s Del Amo 1, dr 5825 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s 1, sd 5510 ft.

DOWNEY—C. F. Acker's Downey 1, sd 270 ft.

EL SEGUNDO—Rider Synd.'s 1, stg 2300 ft. Southern California Drlg. Co.'s 1, fsh 4864 ft.

GARDENA—Circle Oil & Gas Co.'s 1, sd 4130 ft.

HAWTHORNE—Smith Pet. Co.'s Johnson, sd 6215 ft.

JULIAN CITY—J. E. O'Donnell's 1, dr 3760 ft.

MAYWOOD—Magnolia Pet. Synd.'s 1, stg 4452 ft.

NEWHALL-SAUGUS—Geo. W. Johnson's Wickham 1, sd 2840 ft. W. W. Stabler's Castaic 1, sd 3408 ft. Fisher & Co.'s San Francisquito 1, ready to spud in.

...and when it arrives it's ready to run in!
When the Elliott-Alco Core Drill is delivered to your rig it is complete, in perfect working condition, ready to run in the hole. Nothing has been forgotten. No mistake has been made in sizes. You don't have to check up to see that everything in Okeh. Every extra you will need is there too.
That is the character of Service that is back of every Elliott-Alco Core Drill. It is ample, but not superfluous It has saved thousands of dollars in time and production for hundreds of operators—and it will for you.
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ELLIOTT-ALCO CORE DRILL

OLIVE—Standard's C. B. 1, grading for rig.

PALMS—Standard's Marblehead 1, rigging rotary.

PALOS VERDES — Petroleum Securities Co.'s Weston 1, prep to aban 3266 ft.

PLACENTIA—Shell's Allec 1, dr 350 ft.

POTRERO—Associated's Cypress 1, stg 4450 ft. Johnson 1, dr 3200 ft. California Eastern Oil Co.'s Cypress 1, dr 4200 ft.

RIVERA — Geo. F. Getty's Tubbs 1, dr 2600 ft.

SAN FERNADO—Shell's Mission 1, stg cmt 715 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s Didier 3, stg cmt 2255 ft. D. & B. Oil Co.'s Amar 1, dr 4126 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Foster 1, dr 1810 ft. Norswing & Halbertson 1, sd 4060 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s MJM 1, sd 4210 ft.

WATTS—Southwest Pet. Corp.'s Ramsuar 1, fsh 835 ft.

RIVERSIDE COUNTY—Corona Oil & Gas Test's 1, prep to abn 1550 ft. Spindletop Oil Synd.'s 1, susp 2750 ft. Trabuco Oil Co.'s 1, dr 2210 ft.

SAN BERNARDINO COUNTY—Burgess-Goodale's Riggins 1, sd 4110 ft. Colton Terrace Oil Co.'s Colton 1, dr 1400 ft. Como Oil Co.'s Cajon 1, dr 1789 ft. Del Rosa Oil Co.'s No. 1A, r 835 ft. H. & P. Oil Co.'s Ranger 1, trying to pull 6¼-inch cas 2150 ft. McCarty-Collier's 1, dr 1340 ft. Lamona Oil Assn's Vizio 1, lcn. Western Pacific Oil Co.'s 3, fsh 2900 ft.

SAN DIEGO COUNTY—Cardiff Oil Corp.'s Turner 1, sd 2805 ft. Oceanside Oil Co.'s Dunn 1, dr 1981 ft. Torrey Pines Oil Co.'s 1, sd 478 ft.

NORTHERN CALIFORNIA

Completion

Company, Well and Location	Initial Production Bbls.	Depth
ROUND MOUNTAIN—		
Elba Oil Co.'s test	400	2074
COLOUSA COUNTY—		
Brown & Cockerill's 1	2	721

KERN COUNTY

ANTELOPE PLAINS—W. H. Davis' 1, r 3100 ft.

BAKERSFIELD — Pacific-Eastern's 1, recement, 4074 ft.

BELRIDGE—Standard Oil Co.'s 1, dr 2567 ft.

BUTTONWILLOW — Milham Exploration Co.'s 1-A, cmt 4660 ft; No. 1, dr 3394 ft.

COMANCHE POINT—Kern 29 Oil Co.'s 1, sd 2440 ft.

DELANO—C. C. M. O. Co.'s Delano, recmt 1689 ft.

DEVILS DEN—Devils Den Prod. Co.'s 5, dr 1270 ft. W. T. Garrett's 1, rig. Marathon Oil Co.'s 1, fsh 4390 ft. Robins Oil Co.'s 1, sd 2280 ft R. H. Sayers 1, dr 1230 ft.

ELK HILLS—McAdams Pet. Co.'s 1, dr 5465 ft.

GOULD HILLS—A. J. Bomke's 2, sd 610 ft. Banke & Ball's 1, dr 200 ft. Carolina-Western's 1, sd 1330 ft. California-Kentucky Oil Co.'s 1, dr 650 ft. Myrtle E. Oil Co.'s 1, sd 915 ft. Mendocino-Midway's 1, sd 2930 ft. Max L. Pray's 1, rigging 1000 ft. Rhoads Oil Co.'s 1, sd 1485 ft. L. E. Westrich's 1, sd 1755 ft.

McKITTRICK FRONT—Abbott Pet. Co.'s 1, sd 1991 ft. Lacy-Esper Pet. Co.'s 1, co 3260 ft. Ozena Oil Co.'s 1, rigging rotary. Ridge Oil Co.'s 1, dr 4030 ft.

NORTH MIDWAY—Bolsa Chica Oil Co.'s 1, sd 185 ft.

ROSEDALE—Muroc Development Co.'s 1, dr 1500 ft.

SHALE HILLS—Huntington-Hawthorne's 1, sd 600 ft. Nelson & Mountford's 1, sd 2960 ft. Oildale Oil Co.'s 1, sd 558 ft.

SUNSET—Fresno-Sunmaid's 1, sd 4200 ft. Gore Exploration Co.'s 1, dr 4500 ft. Raleigh Oil Co.'s 1, sd 1462 ft.

TEMBLOR HILLS—Fortuna Oil Co.'s 1, sd 2499 ft. Jackson-Harrison's 1, rig. Hovey Hills Oil Co.'s 1, sd 2510 ft. Painted Hills Oil Co.'s 1, sd 500 ft.

TEHACHAPI-MOJAVE—C. R. Asmussen's

ANOTHER ABERCROMBIE JOB!

WITH THE J.S.ABERCROMBIE INSIDE CUTTING TOOL

Vacuum Oil Co.'s Bordages No. 2 Well

—at West Lake, La., showing cuttings of 4¾-inch, 18 lb. pipe, cut and removed from depth of 3754 feet.

132 Cuts from 1 to 40 ft. long

—were successfully made and fished out on this job, which was CEMENTED inside 6⅝-inch casing, 3740 ft. up to 3150 ft.

THIS is the kind of "proof" we are prepared to offer to all who question the efficiency—the reliability—the economy—of the J. S. Abercrombie Inside Cutting Tool.

NINE experienced men, thoroughly capable of operating this tool, enable us to give you PROMPT SERVICE.

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J. S. ABERCROMBIE CO.
616-18 West Bldg. Houston, Texas

Say you saw it in The OIL WEEKLY

1, sd 1510 ft. Crusaders Drilling Co.'s 1, dr 2328 ft. John B. Harding's 1, dr 1038 ft.

UPPER POSO CREEK—Buchner Bros.' 1, prep to abn 1096 ft.

FRESNO COUNTY

CLOVIS—Fresno-Madera's 1, sd 3760 ft.

WARTHAM—Bald Mountain Drilling Co.'s 1, sd 905 ft.

RAISIN CITY—Fresno-United Oil Co.'s 1, sd 3961 ft.

KINGS COUNTY

KETTLEMAN HILLS — Ahlburg Gasoline Corp.'s 1, sd. Associated Oil Co.'s 1, sd 2043 ft. Bolsa Chica Oil Co.'s 1, prep to resume dr 2360 ft. Chanslor-Canfield's 1, dr 3340 ft. General Pet. Corp.'s 1, dr 3105 ft; 1, dr 1768 ft. Milham Exploration Co.'s 1, dr 2355 ft. South Coalinga Oil Co.'s 1, r 2160 ft. Ogden Extension Oil Co.'s 1, sd.

VENTURA COUNTY

CAMARILLO—Standard Oil Co.'s Camarillo 1, dr 5040 ft.

CASITAS—Miley Exploration Co.'s Casitas 2-A, sd 568 ft.

FILLMORE—Sespe Oil Co.'s Smith 2, sd 4003 ft.

HOPPER CANYON — Bishop-Buckeye Union's 2, rigged. Hopper Canyon Oil Co.'s 1, sd 5005 ft.

MOORPARK—E. A. Parkford's Lloyd 1, dr 2837 ft. Shell Co.'s Berlywood 1, dr 3498 ft.

MONTALVO—Standard Oil Co.'s Montalvo 1, dr 5560 ft.

OJAI—Bradford & Geiss' No. 1, dr 1723 ft.

PIRU—Superior Oil Co.'s Pena 1, sd 5028 ft.

SOUTH MOUNTAIN—Ring Pet. Corp.'s Converse 1, co 3115 ft.

VENTURA DIST.—Associated Oil Co.'s 1, dr 3937 ft. Chanslor-Canfield's Hobson 1-A, dr 6469 ft; Hobson 1-B, sd cmt 4253 ft. Star Pet. Co.'s Canet 1, dr 4655 ft. Rio Grande Pet. Co.'s Canet 1, prep to abn 4942 ft.

SANTA BARBARA CO.—Barnsdall Oil Co.'s Edwards 1, fdn. Clarence J. Berry's Pomatto 1, rigged up; Cavaletto 1, dr 270 ft. Graham-Loftus' Refugio 1, dr 70 ft. Channell Oil & Dev. Co.'s 1, co 4710 ft. Hollywood Oil Corp.'s 1, sd 1300 ft. Summerland Oil Co.'s Becker 1, co 2742 ft.

SAN LUIS OBISPO COUNTY — Arroyo Grande Pet. Co.'s test, sd 4386 ft. Butler-Ritchie-Rasmussen's 1, dr 700 ft. Holland-Kennebrew's 1, re-dr 1712 ft. Painted Hills Oil Co.'s 1, sd 1040 ft. Panorama Oil Co.'s 1, co 2003 ft. San Luis Synd.'s 1, rigging up. Richfield Oil Co.'s 1, dr 623 ft.

MONTEREY COUNTY—Petroleum Securities Co.'s 1, dr 2275 ft.

TULARE COUNTY—Kings-Tulare Synd.'s 1, sd 3000 ft. Wm. C. Resser's 1, prep to resume dr 1815 ft.

SAN MATEO COUNTY—Shell Co.'s 1, dr 3520 ft. Ashton-Craft's 1, dr 1456 ft.

SONOMA COUNTY—Shell Co.'s 1, dr 5271 ft.

ALAMEDA COUNTY—J. E. Burney's 1, sd 1167 ft. Olhoma Oil Corp.'s 1, dr 945 ft. Thomas & Hammill's 1, dr 1037 ft.

COLOUSA COUNTY—Continental Oil Co.'s 1, re-dr 3800 ft.

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
ASHLEY COUNTY—		
Rhodes et al, Bledso 1, 20-15-7.....	*	2554
UNION COUNTY—		
Lion O. & R. Co., Murphy Land 1, 23-18-18	*	3078
Simms Oil Co., Crawford 1, 14-18-13	*	2705

BRADLEY COUNTY—Johnson & Adams Southern Lbr. 1, 12-12-12, fsh 2205 ft.

CALHOUN COUNTY—Arkansas Nat. Gas Co.'s Stout 1, 2-13-14, dr 200 ft.

CLARK COUNTY—Whelen Oil Co.'s Barrow 1, 35-10-20, dr 2315 ft.

COLUMBIA COUNTY—Atlantic's Couch 1, 23-17-20, dr 1426 ft. Columbia Sydn's Whitehead 1, 14-19-23, sd 2350 ft. Colquitt & Thomas' Duffer 1, 23-18-19, dr 2205 ft. Haynes et al's Runyan 1, 3-16-21, sd 525 ft. Mitchell et al's Frank 1, 25-19-22, sd 150 ft. Mitchell & Isles Bodcaw 2, 4-20-21, r 2185 ft. Maier et al's Gantt 1, 15-17-22, dk. Scott Phillips' Davis L. & I. Co. 2, 6-18-20, sd 2145 ft. Wingfield et al's Bodcaw 1, 4-20-21, sd 2025 ft.

DREW COUNTY—McClintock's et al's Ogle 1, 35-3-5, sd 2550 ft.

GRANT COUNTY—Jones et al's Meek 1, 5-4-11, sd 400 ft.

GARLAND COUNTY—Chaywood Oil Co.'s Malvern Lbr. 1, 17-2-17, sd 500 ft.

HEMPSTEAD COUNTY — Arkansas Nat. Gas Co.'s Goodlet 1, 34-10-26, dr 1503 ft. Burton et al's Garland 1, 23-10-25, sd 2210 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lbr. 2, 5-20-24, sd 2840 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-5, sd 647 ft.

LITTLE RIVER COUNTY—Greeson et al's Waldrip 1, 4-13-31, sd 1740 ft. Grote et al's Allen 1, 2-13-31, sd 2941 ft. Johnson et al's Allen 1, 2-13-31, sd 2941 ft. Johnson et al's Hawkins 1, 10-11-31, sd 1594 ft.

MILLER COUNTY—Lenze et al's Dale 2, 28-15-26, sd 3000 ft. W. D. Nash's Priest 1, 26-15-27, sd 3850 ft.

NEVADA COUNTY—Greeson et al's Grove 1, 12-14-21, set 6-inch 1148 ft. Hilmes et al's Wallace 1, 11-14-21, dr 950 ft. Ozan Oil Co.'s Ellis 6, 2-14-21, wosr 1155 ft.

OUACHITA COUNTY—F. A. Book Tr's Johnette 3, 35-5-16, arr to deepen 1980 ft. J. E. Grosby's Berry 12, 33-15-15, arr to aod 2300 ft. Exchange Oil Co.'s Umpsted 3, 4-16-15, swabbing at 2364 ft; Berg 2, 4-16-15, arr to plug back at 2395 ft; Berg 6, 4-16-15, set 6⅝ in. at 2361 ft; Berg 7, 4-16-15, rig; Berg 8, 4-16-15, dk. A. T. Grayson's Reynolds 1, 21-14-17, sd 1744 ft. Imperial O. & R. Co.'s McClannahan 9, 6-16-15, milling 2640 ft. Middlesex Oil Corp.'s Shirley 5, 26-15-17, blg 2303 ft. Magnolia's Morgan 1, 7-15-19, dr 2205 ft.; Stout B-1, 28-14-16, rig. L. D. Reynolds' Chandler 1, 3-14-17, arr to abn 1900 ft. Sutton's Schoolhouse 2, 28-15-16, sd 3060 ft. Unity Pet. Co.'s Umsted A-8, 33-15-15, sd 2388 ft.

UNION COUNTY— C. H. Allison's Howard 1, 8-19-15, sd 15 ft. Brown et al's Slaughter 1, 2-17-16, sd 2296 ft. Bondurant et al's Garner 1, 8-18-22, sd 2635 ft. G. J. Child's Fee B-2, 8-16-16, dr 1700 ft. Crescent Oil Co.'s Saxon 1, 5-16-16 sd 53 ft. Garrett & Modisette's Union Saw Mill 1, 7-18-13, dr 4040 ft. W. H. Gilliland's Hodges B-1, 1-16-17, sd 2565 ft. Gulf's H. Murphy 45, 4-16-15, dk. Humble's Flenniken B-2, 9-16-15, arr to swab 2766 ft; Pate 10, 10-16-15, wosr 2383 ft. Imperial O. & G. Co.'s Murphy 5, 9-16-15, sd 2565 ft; Goodwin 1, 22-17-16, sd 3118 ft. E. M. Jones Lawton A-2, 10-16-15, dk; Murphy 10, 17-16-15, dk; Keene & Wolfe's Murphy 6, 9-16-15, dk. Lyall et al's Stegall 1, 11-17-13, set 12½ in. at 47 ft. Magnolia's Crawford 3, 8-16-16, dk; Laney 3, 8-16-16, dk; Laney 4,

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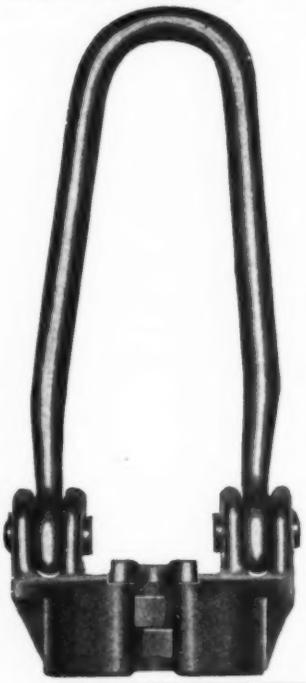

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8-16-16, dk; Murphy 3, 8-16-15, dk; Murphy 9, 8-16-15, dr 2720 ft; Wilson 6, 17-16-15, dr 2781 ft; Wilson 7, 17-16-15, dk; Union Lbr. Co. 1, 21-16-16, dr 2546 ft. Mountz et al's Pratt 6, 6-18-15, dr 1750 ft. Murdock et al's Vestal 1, 17-16-15, arr to deepen 2813 ft. Marine Oil Co.'s Winn Estate 1, 11-18-13, arr to core 2705 ft. National Consolidated Pet. Co.'s W. A. Fagg 1, 8-16-16, sd 2320 ft; Fagg 2, 8-16-16, wosr 2647 ft. Natural Gas & Fuel Corp.'s Murphy F 5, 9-16-15, set 6⅝ in. at 2780 ft; Murphy E-3, 9-16-15, set 10 in. at 192 ft; J. J. O'Brien's Saxon 1, 16-16-16, wosr 2170 ft. Ohio's Murphy 5, 9-16-15, dr 2812 ft. Rovenger Oil Corp.'s Harrell 4, 15-17-16, dk; McCain 1, 4-17-16, wosr 2834 ft. S. Richardson et al's Lawton 5, 10-16-15, bld dry 2721 ft. Rice et al's Newton 1, 13-17-16, sd 2260 ft. Southern Crude Oil Purch. Co.'s Wells A-5, 15-16-15, dr 2620 ft. Sunny Jim Oil Co.'s Flenniken 4, 9-16-15, set 6⅝ in. at 2685 ft. Sun's Hays 3, 3-16-15, arr to perforate cas at 2288 ft; Thompson 1, 10-18-13, bldg dry 2548 ft. Unity Pet. Co.'s Roper 15, 3-16-15, dk. L. M. Vaughn Trustees' Ezell 1, 12-17-15, set 6 in. at 2149 ft. Wingfield et al's Greer 1, 5-19-13, dk.

LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Bahan & Bahan, Wilburn 1, 4-17-16	*	1268
Owl Oil Co., Bell 1, 5-17-16	*	1952
Texas Co., Hicks & Payne 5, 21-21-15	*	3143
GRANT PARISH—		
M. B. Swope, Fee 1, 18-9-1e	*	1632
RED RIVER PARISH—		
Phillips Pet. Co., Long Bell 1, 16-12-8	*	3305
WINN PARISH—		
Humble, L. & A. 22, 33-10-2w	*	1503

BIENVILLE PARISH—S. F. Borden's L. & A. 2, 9-15-7, arr to abn 3645 ft. E. J. Forrest's Perritt 1, 11-17-6, dk. W. E. Hick's Hodge Hunt 1, 21-16-5w, dk. Kimbrough et al's Cargyle 1, 27-15-18, sd 1550 ft.

BOSSIER PARISH—Doern et al's Thomas 1, 9-22-11, sd 2765 ft. Glassell et al's Gibson-Tiguer 1, 14-21-12, sd 1840 ft. Humble's B. & W. 30, 15-19-11, dr 2135 ft. Magnolia's Dodson 1, 15-23-12, sd 3084 ft. Palmer Corp.'s Bossier L. & L. Co. 4, 9-16-11, dr 4023 ft. Ramsey et al's Dodson Est. 1, 16 23-12, dr 2785 ft; Robertson 1, 22-23-12, arr to dr deeper at 3099 ft. Sligo Synd.'s Jeter 1, 23-17-12, dr 2500 ft. C. O. Tate's Dodson 1, 15-23-12, set 15½-inch 240 ft. Texas' Caplis 14, 24-16-12, wosr 1551 ft. Tubbs et al's Jacobs 1, 26-20-13, dr 3000 ft.

CADDO PARISH—Askew et al's Elliott 1, 12-19-16, coring 2112 ft. Ark. F. O. Co.'s Gayle 8, 30-16-12, set 6-inch 1857 ft. Bahan et al's Wilburn 2, 4-17-16, swabbing 2743 ft. J. R. Bahan's Stringfellow 3, 19-17-16, rig. Bayou State Oil Co.'s Hoss 29, 24-22-15, rig. Bethany O. & G. Co.'s Offenhauser 1, 1-20-16, sd 2225 ft. J. W. Burton's Bunker & Thompkins 16, 18-21-15, set 6-inch 986 ft. W. D. Chew's Fee 6, 33-21-16, set 6-inch at 1800 ft. Dixie Oil Co.'s Robertshaw 88, 13-21-15, dr 1019 ft; Slattery 10, 27-21-15, set 6-inch 3877 ft; Noel A-2, 13-21-15, tested sw and show of gas 3836 ft; Fitzsimmons 8, 14-21-15, dr 2257 ft; Mabry B-5, 14-21-15, dr 187 ft. Dobson et al's Rives 5, 5-20-16, dr 1480 ft. Double I Oil Co.'s Spell 10, 15-21-15, set 6-inch 1396 ft, dr 1420 ft. Empire's Levee Board B-1, 36-21-16, dr 750 ft. J. B. Files' Payne 1, 32-23-16, sd 925 ft. Falcon Drilling Co.'s Schmidt 1, 27-20-15, dk. Gilliam Synd.'s Sellington 1, 17-21-14, sd 2732 ft; Taylor 1, 17-21-14, sd 915 ft. Gulf's Ferry Lake 269, 29-20-16, dr 2050 ft; Tycon 13, 14-21-15, dr 3120 ft; Wemple 5, 14-20-15, sd 2206 ft. B. A. Hardy's Agurs 2, 6-16-16, rig; Glassell 1, 27-18-16, dk; Trosper 1, 35-18-16, dk; Wheeler 1, 16-18-16, lcn. Haynes Bros.' Murray 1, 14-21-15, coring 3278 ft. Lewis Oil Corp.'s Raines 18, 22-21-15, dr 50 ft. Luby Oil Co.'s Levee Board 15, 23-22-15, set 6-inch 992 ft. Magnolia's Bell 4, 4-17-16, r 940 ft; Caddo L. B. 2, 8-20-15, sd 2910 ft; Dillon 16, 24-21-15, dr out cmt at 1200 ft; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Caldwell 4, 24-21-15, dr 1000 ft; Robertshaw 20, 23-21-15, pulling liner 3614 ft; Robertshaw 21, 23-21-15, lcn. Marshall Nat. Gas Co.'s Sharp 1, 22-18-16, set 8-inch 1837 ft. Ohio's Aaron Burr 1, 32-23-16, set 10-inch 200 ft; Smith 25, 12-21-15, set 10-inch 2435 ft. Owl Oil Co.'s Florsheim 4, 9-17-16, lcn; Wilburn 3, 4-17-16, lcn. Shreveport Oil Corp.'s State 1, 28-21-16, dk; State 2, 27-21-15, set 6-inch 1380 ft. Simplex Oil Co.'s Schmidt 2, 15-20-15, rig. Standard's Hart 12, 34-21-16, wosr 1827 ft; Hart 13, 34-21-16, rig; Stiles 186, 33-21-16, dk. Texas Co.'s C. M. L. Co. 47, 23-21-15, fsh 3657 ft; Curtis 7, 14-20-15, set 6¼-inch 2200 ft; Noel B-13, 14-21-15, dr 2675 ft. Tholl Oil Co.'s Muslow 3, 31-21-15, wosr 1670 ft. Tubbs et al's Hines 1, 9-14-16, rig.

CALDWELL PARISH—Southern Crude Oil Purch. Co.'s Caldwell L. T. Co. 8, 5-13-5e, sd 147 ft.

CATAHOULA PARISH—S. D. Hunter's Tensas Delta 2, 21-9n-7e, rig. Lochnager O. & G. Co.'s Beasley 1, 26-9n-6e, sd 3093 ft.

CLAIBORNE PARISH—Magnolia's Lee 1, 16-22-8, dr 3560 ft. Mitchell et al's Wilborn 1, 23-18-7, r 2650 ft. Tate et al's Maddox 1, 21-23-7, dr 1400 ft.

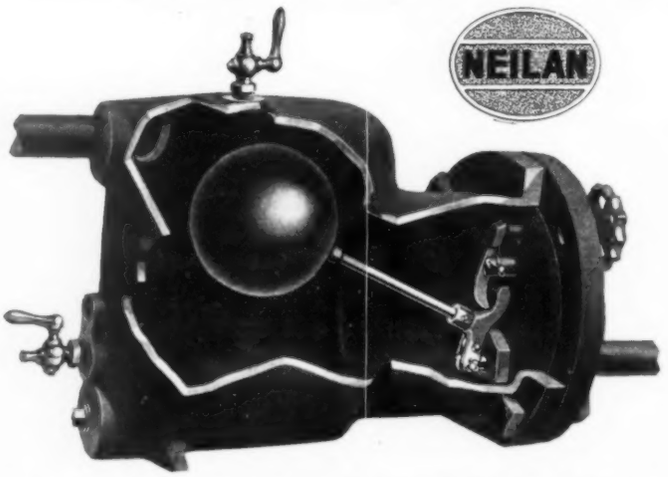
DE SOTO PARISH—Berry & LeGrandes' Girque 1, 3-10-11, dk. Dixie Oil Co.'s Jenkins 1, 9-12-11, fsh 5283 ft. Helm & Jarman's Joyner 1, 28-11-12, sd 3018 ft. Hoosier Oil Co.'s Lanier 1, 5-11-11, dr 1800 ft. Magnolia's Logan 1, 17-10-12, dr 2625 ft. Reliance Drilling Co.'s Jones 1, 8-11-14, dr 1700 ft. W. M. Sebastian Synd.'s Sebastian 1, 11-10-15, arr to dr deeper 3223 ft. Seip et al's Robertson 1, 18-10-12, sd 600 ft. Texas Co.'s Wemple A-12, 2-12-12, wosr 2433 ft; Sample C-15, 36-13-12, sd 2432 ft.

FRANKLIN PARISH—Barbour Oil Co.'s Baker 1, 3-15-7e, sd 2595 ft. Harrell & Hall's Duncan 1, 20-13-7e, sd 2084 ft.

GRANT PARISH—Rue et al's Elias & Williams 1, 10-7-4, sd 1913 ft.

JACKSON PARISH—Grigsby et al's Adams 1, 22-17-4w, sd 2900 ft. Houseman et al's Norton 1, 34-15-3w, sd 400 ft. Ferguson Trust's Martin 1, 3-15-1e, flowing sw at 3475 ft.

LA SALLE PARISH—A. E. Hudson's Urania 5, 7-10-2e, set 6-inch 1510 ft. Louisiana O. R. Corp.'s Tremont B-1, 3-10-2e, bailing 1584 ft. Tunica Pet. Co.'s L. & A. 27, 9-7-2e, arr to abn 800 ft; L. & A. 28, 9-7-2e, set 6-inch 748 ft; Whatley 1, 9-7-2e, arr to abn 830 ft; Hardt-



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ner 1, 9-7-2e, dr 500 ft. Yeary et al's Urania 5, 8-10-2e, sd 1552 ft. Wingfield et al's Gibson 1, 2-9-1e, sd 1470 ft; Gibson 2, 2-9-1e, dk.

MOOREHOUSE PARISH — Consolidated Caron Co.'s White 1, 16-20-4, dr 1866 ft. Falcon Drilling Co.'s Gladney 1, 5-21-7e, rig. Natural Gas Prod. Co.'s Crossett 20, 21-23-7e, dk. United Carbon Co.'s Townsend 1, 29-21-5e, dr 2124 ft; Atkins 1, 26-20-5e, dk.

NATCHITOCHES PARISH—Lawson et al's Clark & Morse 1, 23-5-6w, sd 2835 ft. Ohio Oil Co.'s Thomas 1, 23-13-6w, dr 2168 ft. E. C. Reidenheimer's Blewer 1, 10-11-8, arr to abn 1533 ft.

OUACHITA PARISH—Consumers Gas Co.'s Williams 1, 10-19-5e, set 12-inch 202 ft. Louisiana Dev. Co.'s Fee 39, 1-19-4e, set 6-inch 2130 ft; Fee 40, 29-10-5e, dr 50 ft; Fee 41, 31-20-5e, lcn. Ouachita Nat. Gas Co.'s D'Arbonne 2, 25-19-2e, sd 2780 ft. Peerless Co.'s Moore 3, 29-20-4e, lcn. Palmer Corp.'s Millsap 4, 36-20-4e, dr 852 ft.

RAPIDES PARISH—Minnesota Oil Corp.'s Wattermack 1, 7-5-3w, sd 2091 ft. George Sebatier's Ritchie 1, 38-5-4, dr 1136 ft.

RED RIVER PARISH—Alden Oil Co.'s Powell 1, 13-11-10, sd 2301 ft. Gulf's Kennedy 23, 24-13-11, co 2551 ft.

RICHLAND PARISH—Gulf's Rhymes 2, 5-16-6e, shut in 2880 ft. Wayne L. & T. Co. 1, 36-17-5e, sd 3052 ft; Seibert 2, 11-16-5e, sd 2303 ft. S. D. Hunter's Seibert 1, 1-16-5e, sd 2358 ft. Helm et al's Tensas 1, 10-14-5e, dk. Louisiana Pet. Co.'s Binion 1, 22-17-6e, sd 2474 ft. Oliver et al's Hatch 1, 2-15-5e, trying to set cas 2316 ft. Ruston Drilling Co.'s Earl 1, 5-16-5e, set 6-inch 2330 ft. Standard Drilling Co.'s Delta H. L. Co. 1, 22-16-7e, sd 200 ft. Tex-La Carbon Co.'s Broughton 1, 1-15-6e, sd 2602 ft.

SABINE PARISH—Arkansas F. O. Co.'s Logan A-1, 23-10-12, lcn; Logan 2, 28-10-12, dr 2770 ft; Horn 1, 33-10-12, rig; Logan 6, 33-10-12, dr 1080 ft; Logan 7, 33-10-12, dr 2991 ft; Logan 8, 33-10-12, dr 1431 ft; Logan 9, 33-10-12, dr 152 5ft; Moore 1, 32-10-12, dr 2195 ft; Rembert 1, 5-9-12, dr 2448 ft; Williams 1, 33-10-12, dr 1164 ft. Emlet et al's Bowman Hicks 5, 8-7-12, fsh 4070 ft; Bowman Hicks 6, 8-7-12, arr to deepen 3710 ft; Bowman Hicks 7, 11-7-14, rigging up on second hole; Bowman Hicks 8, 16-7-12, dr 600 ft; Sabine Lbr. Co. 1, 8-7-13, dk. Lewis Clark Pet. Co.'s Wyatt 1, 23-5-12, dr 3850 ft. Louisiana O. R. Corp.'s Logan 1, 20-10-12, arr to dr plug at 3122 ft. H. J. Morgan's Reese 1, 5-9-12, dk. Magnolia's Hall 1, 33-10-12, dr 2100 ft; L. L. L. Co. 2, dr 150 ft. C. W. Robinson's Hamlin 1, 6-9-13, dr 1100 ft. Woodley Pet. Co.'s Robinson 1, 33-10-12, bailed dry, arr to deepen 3256 ft.

UNION PARISH—Camette et al's Tugwell 1, 21-22-1e, sd 1525 ft. Clark Creek Pet. Co.'s Frost Johnson 2, 9-23-1e, sd 2307 ft. Interstate Nat. Gas Co.'s Parks 1, 23-20-3e, dk.

WEBSTER PARISH—Davis et al's Lee 1, 22-22-9, sd 3312 ft. Louisiana O. R. Corp.'s Gray 7, 28-21-10, coring 2550 ft. Magnolia's Cox 3, 23-21-10, dr 2512 ft; Marshall 1, 21-21-10, set 6⅝-inch at 2546 ft; Marshall 2, 21-21-10, lcn. Northwest Louisiana Gas Co.'s Coyle 1, 21-21-10, dr 4180 ft. Ohio's Bank of Cotton Valley 2, 22-21-10, dk; Bank of Cotton Valley 4, 22-21-10, dr 2512 ft. Woodley Pet. Co.'s Cox B-1, 23-21-10, rig.

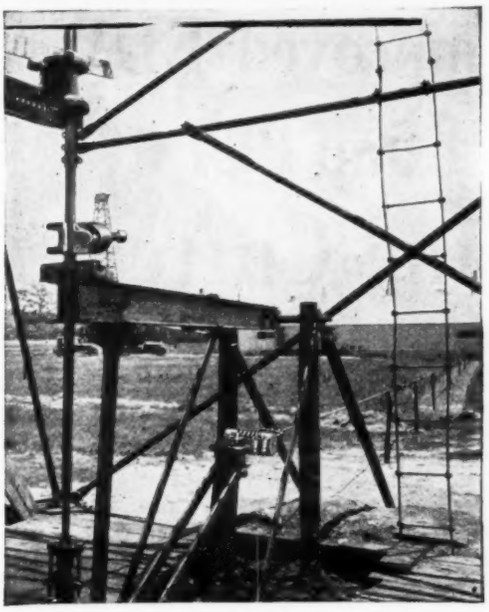
WINN PARISH—Cherokee Pet. Co.'s Albritton 1, 27-10-1e, sd 900 ft. Dodge et al's Tremont 1, 35-13-3w, dr 1140 ft. Greer et al's Bodsaw 2, 9-11-4w, sd 50 ft. Humble's L. & A. 23, 33-10-2w, lcn. H. L. Hunt's Tremont 1, 27-10-1e, sd 1200 ft. J. C. Long's Milam 1, 26-13-2w, dr 1550 ft. Ohio Oil Co.'s McCarty 1, 5-12-1w, dr 2316 ft. Rowe et al's Urania 1, 26-11-1e, dk. H. M. Roark's Southern Mineral Co. 1, 19-11-3w, dr 946 ft. Standard's Tremont 1, 1-12-2w, dr 4006 ft.

SOUTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
EVANGELINE PARISH—		
The Texas So.'s Guillory 2, Pine Prairie	*	4832
CAMERON PARISH—		
Yount-Lee's School Land 6	*	5312

CALCASIEU PARISH—Union Sul. Co.'s Fee 720, Sulphur, trying to sdtr 4392 ft. Dr. Hintze's Beckenstein 1, Sulphur, hole cleaned



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uot, setting 3500 ft of 6⅝-inch cas. Border Research Corp.'s Calcasieu Lake 1, dr 4855 ft. Gulf's LutcherMoore 5, Starks dome, dr 4676 ft, hard sand; Industrial Lbr. Co. 1, Starks dome, coring sand 3884 ft.

CAMERON PARISH—Pure's Sweet Lake 4, Sweet Lake, dr 3205 ft, gumbo; Sweet Lake 5, Sweet Lake, dr 3853 ft, sand. Hackberry—Yount-Lee's State Land 4, dr 3937 ft, sand and shale; Gulf Land 10, dr 4079 ft, sand, shale and boulders; School Land 6, abn 5312 ft, shale and boulders. Calcasieu Oil Co.'s Caldwell 1, cored sand at 1200 ft, no show, dr 1300 ft. Border Research Corp.'s Mallard Bay 1, sd 2690 ft; Sabine Lake 1, sd 1500 ft.

EVANGELINE PARISH—Ville Platte Pet. Co.'s Fontenot 1, Ville Platte, sd 1612 ft. The Texas Co.'s Guillory 2, Pine Prairie, abn 4832 ft.

JEFF DAVIS PARISH—Estropal Oil Co.'s Le Doux 2, sd 2982 ft.

IBERIA PARISH—Gulf's State Z-2, Eagle Point, sd 1368 ft. Calcasieu Oil Co.'s Schwing A-1, Eagle Point, sd 3001 ft. Border Research Corp.'s Vermillion Bay 1, sd 1008 ft.

ST. MARY PARISH—Border Research Corp.'s Grand Lake 1, sd 4519 ft; West Cote Blanche 1, no report.

TEXAS

GULF COAST

AUSTIN—Humble's Bellville School 1, Raccoon Bend, dr 3675 ft. Reese 2, dr 3365 ft, shale and sand, showing oil 3345 ft, will set 6 in. cas R. E. Graves et al's Cleveland 1, Hickory Md., sd in blue shale 1295 ft. Mewis et al's Mewis 1, Belleville, dr 1409 ft, shale. Kane et al's Knolle 1, Bellville, temp abn 721 ft.

BRAZORIA COUNTY — Roxana's Clemens 4, Clemens dome, fsh for bit 4817 ft; Randon 1, dr; Pabst A-2, dr out plug 5402 ft; Bell 1, temp abn, 2008 ft, shale; Allen 4, dr 608 ft, gbo. Texas Co.'s Carter 1, Pledger, dr 387 ft. Starks et al's Hinkle 1, Hinkle's Ferry, dr 655 ft, red and blue shale. Staley et al's Glover 1, Anchor, dr 1110 ft, sand and bldrs. Gulf's Perry 1, Stratton Ridge, sdtr junk 3148 ft. Associated's Seaburn 1, Stratton Ridge, fsh 4084 ft, 3500 ft of cas fshd out Pure-Humphreys' Armstrong 1, Stratton Ridge, dr 3975 ft, sticky shale.

FORT BEND COUNTY — Gulf's Trone 3, Long Point, dr 758 ft, cap rock; Wolfe 3, dr 735 ft, hard shale; Davis 25, lcn. Sun's Farmer 3, Boling, dr 2116, gbo and lime.

HARRIS COUNTY—P. S. Griffith's Fee 2, 12 mi n Houston, dr 3345 ft, gbo; Juanita Oil Co.'s Kitsman 1, 3 mi n Cypress, dr 509 ft, shale. Humble-Marland's Warren 1, Hockley, dr 2368 ft gbo.

JEFFERSON—Gulf's Bordages 3, Fannett, set 6⅝ in 5272 ft, sand showing oil, td 5314 ft. Houston Oil Co.'s Fitzhugh 2, Big Hill, dr 3110 ft, hard packed sand. J. O. Davis et al's Gladys 1, Spindle Top, dr 6025 ft, shale. Texas Co.'s Garrick 1, Spindle Top, dr 4800 ft, sand and shale.

MATAGORDA COUNTY—Gulf's Craig 8, Hawkinsville, dr 4978 ft, sandy shale and shell; Sanborn 3, dr, 3255 ft, gbo; Parkinson 3, dr 929 ft, cap rock.

MONTGOMERY — Brain et al's Fitch 1, Spring, sd 2350 ft.

NACOGDOCHES—Steine & Lewis' Birdwell 1, sd 1080 ft.

ORANGE—J. T. Miller Drlg. Co.'s Brown-Ocultree 1, Gum Island, dr 3308 ft, gbo. W. C. Wells' Stark 2, Adams Bayou, dr 3256 ft., sand and shale.

WASHINGTON—C. A. DeWare's Lehmann 1, Brenham, sd 2730 ft. Pratt-Hewitt's Konieczny, Brenham, dr 3130 ft, shale.

SAN ANTONIO DISTRICT

CALDWELL COUNTY—Lou Gould Shaddon's Davis 1, dr. United North & South Oil Co.'s Kelly 1, dr; Tiller 1, dr. Van Keuren Oil Co.'s Ridout 1, swabbing.

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr. Cole Pet. Co.'s Benavides 45, dr 1000 ft. Dixie Oil Co.-Southern Crude's Gray 1, sur 315, dr 2350 ft. Humble-Reiter & Foster's Koehler 6, dr 875 ft. Humble's Singer 11, dr; Singer 12, dr 3659 ft; Walsh 7, dr;

Welder-Woods 2, dr 1595 ft; Carillo 1, dr. Houston Oil Co.'s Koehler 5, dr; Benavides 2, dr; Benavides 14, dr. O. W. Killiam's Lopez 3, dr; Lopez 4, dr; Lopez 5, dr; Bruni 1, showing of gas and oil below 2510 ft. Magnolia's Spear 1, dr; Benavides 2, dr 2590 ft. Maurer & Duggan's Hoffman 1, dr. National Oil Co.'s Ball 1, dr. O'Hern & Seacord's Benavides 2, dr 1748 ft. G. B. Pickett's 1, sur 230, dr.

GONZALES COUNTY—Martin Oil Co.'s Preston 1, dr. Kerchival et al's Billings 2, dr.

JIM HOGG COUNTY—Alworth Brothers' M. Garcia 1, dr. Alworth, Stevens & Hill's Garcia 3, dr. American Well & Prospect Co.'s Holbein 1, dr; Allen 1, dr; Lopez 1, dr; Martinez 3, dr. Andrews Pet. Co.'s Bank 1, dr; Palacios 1, dr. Basher & Maddox's 1, blk 18, sur 81, dr; 2, 3 and 4, dr. Collins et al's Palacios 23, dr; 9, blk 21, sur 91, set cas. Cole Pet. Co.'s 36, blk 4, sec 421, dr. Grayburg Oil Co.'s Weil 14, sec 81, dr. Holden et al's Jones 3, dr. Murchison & Fain's Allen 1, dr; Vella 2, dr. Maddox-Humble-Texas' 1, blk 17, dr. Magnolia's Merchant State Bank 17, dr; 19, dr; 20, dr; 22, dr 2525 ft; 23, lcn; Martinez 27, abn. Morgan's Palacios 1, dr. Rycade-Rydal's Lopez 5, dr; Vela 4, dr. Simms Oil Co.'s Leyendecker 1, dr. Edward St. Albans' Lopez 5, dr; Lopez 7, dr; Lopez 8, dr 1600 ft. Texas Co.'s Jones-Weil 2, dr.

WEBB COUNTY—Associated-Carson's Webster 2, dr. J. M. Bashara's Espjo 1, dr. Barnsley-Chicago-Synd.'s 2, blk 22, sec 355, dr. Crown-Central's Garcia 10, sur 606, dr; 12, 13 and 14 Garcia, dr; Bruni 20, dr. Crown-Central-Rydal's Bruni 16, blk 17, testing. Cornhuskers Oil Co.'s Garcia 6, dr. Cole Pet. Co.'s Benavides 36, blk 14, set cas; Benavides 48, dr below 960 ft; Benavides 43, sd 2348 ft; Benavides 44, tested at 2322-39 ft, preparing to bring in; Benavides 45, dr; Benavides 46, moving on; Benavides 47, dk. Daniels' Mesquite 1, dr. Gibble's 1, survey 135, dr. Hamilton-Simmons' Vela 1, sur 267, dr. Houston Oil Co.'s Benavides 2, sec 268, dr; Barnsley 1-A, blk 14, sec 268, dr. Johnson et al's Anderson 1, set cas. O. W. Killam's Puig 1, dr; Billings 1, testing; Garcia 7, dr; Bruni 2, testing; Bruni 3, dr 3212 ft. Killam-Maddox's Bruni 1, sur 4, blk 5, prod 30,000,000 cubic feet of gas at 2317 ft. Laredo Oil Co.'s Garcia 12, abn. Magnolia's Benavides 1, testing. Geo. Marshall's Garcia 1, dr. Moriss Oil Co.'s 2, blk 431, dr. Moody Corp.'s Carpenter 2, dr. Morgan, O'Hern & Seacord's Webster 1, dr. Newton Dr. Co.'s Puig 1, dr. Ramsland et al's Lopez 1, dr. Rawlins & Pelton's Garcia 1, dr. Sun Oil Co.'s Bruni 12, dr. D. J. Simmons' de la Garcia 2, sd 400 ft.

ZAPATA COUNTY—E. K. Bateman's Vela 2, ru. Duke et al's Martinez 3, ru. Hill & Associated's Villa Grant 1, dr. O. W. Killam's Lange 1, dr. Killiam-Duggan's R. B. Cuellar 1, tested sw 1342 ft. Langford-Duke's Charco Rendendo Grant 1, dr. Howard Staggs et al's Hinnants 1, dr. Mission Oil Co.'s Slator 1, dr. Magnolia's Jennings 5, dr; Cuellar 4, dr. Texas Co.'s Jennings 6, dr 300 ft. J. H. Winch's Bustamante 1, dr 1560 ft.

EAST CENTRAL TEXAS

Completion

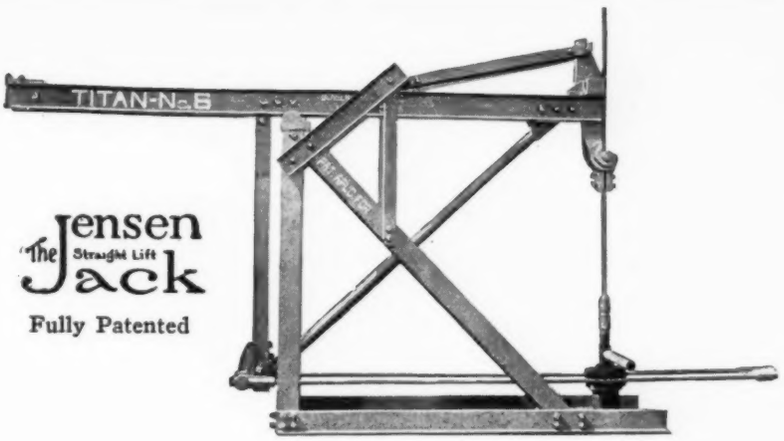
Company, Well and Location	Initial Production Bbls.	Depth
HENDERSON COUNTY—		
Cranfill-Reynolds, Purefoy 1	*	3043

WEST TEXAS

Completions

FISHER COUNTY—		
F. P. Zoch-McCamey et al, Lanius 1	*	3800
JONES COUNTY—		
Kingston et al, Reeves 1	*	2260
PECOS COUNTY—		
Buell-Hagen et al, McKenzie 1 ...	*	2495
TAYLOR COUNTY—		
Grisham-Hunter Corp., Huddleston 1	*	2782
UPTON COUNTY—		
Sartain Oil Co., Mrs. Bull 1	*	3523

ANDREWS COUNTY—Carter-Zweifel et al's Cowden 1, elev 3156 ft, top salt 1375 ft, dr rock and anhydrite 3140 ft. J. S. Cosden et al's Bedford-Ratliff 1, rig. Calvin-Belt et al's Bedford 1, lcn. Deep Rock Oil Co.'s W. J. Harris 1, elev 3168 ft, sp and sd. Maer-Staniforth's Meador 1, elev 3215 ft, top salt



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McCamey—T. P. Thornton Phone No. 63
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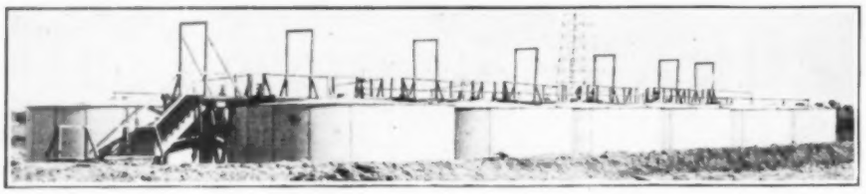

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1650 ft, making gas 3010 ft, sd 3501 ft. C. B. McKinnon et al's J. S. Means 1, sp and sd.

BORDEN COUNTY — Stivers & Guthrie's Snodgrass 1, sd 3000 ft. J. L. Kennedy et al's J. S. York 1, dr 790 ft.

BREWSTER COUNTY—Van McPhail et al's McIntyre 1, dr 220 ft; McIntyre 2, lcn.

COKE COUNTY—Danciger O&R Co.'s Byrens 1, dr 435 ft. Lipan Oil Co.'s Conner 1, elev 2045 ft, sd 1215 ft.

CONCHO COUNTY—Harry Adams et al's Price 1, elev 1918 ft, sd 980 ft. The Exploration Co.'s Wilson-Hartgrove 1, elev 1618 ft, sd 1930 ft.

CRANE COUNTY—Geo. Church & Fields' University 2, rig; University-Duoll 2, rig. Church & Bert Weekly's University 2, elev 2557 ft, top salt 990 ft, dr oil pay 2834-92 ft; University 3, dr 475 ft. Cromwell & Pickrell's University 4, elev 2556 ft, top salt 1040 ft, dr 2180 ft; University 5, elev 2560 ft, top pay 2790 to 2865 ft, flowed 315 bbls; University 6, elev 2560 ft, top salt 1025 ft, dr 2225 ft; University 7, elev 2564 ft, top salt 1080 ft, dr 1610 ft; University 11, elev 2567 ft, dr 415 ft; University 12, elev 2564 ft, dr 605 ft. Eastland Oil Co. & Collett-O'Keefe's University 6, dr 1010 ft; University 7, top salt 1095 ft, dr 2230 ft. Gulf Prod. Co.'s McElroy 10, elev 2570 ft, rig; McElroy 11, elev 2559 ft, top salt 1030 ft, top lime 2678 ft, flowed 60 bbls per hour after shot 110 qts at 2818-2900 ft; McElroy 12, elev 2557 ft, top salt 1010 ft, top lime 2719 ft, flowed 230 bbls per hour 2809-40 ft; McElroy 13, elev 2559, ft, top salt 1050 ft, dr by bit 2020 ft; McElroy 14, elev 2558 ft, top salt 1023 ft, dr 2390 ft; McElroy 15, elev 2561 ft, top salt 1055 ft, dr 2310 ft; McElroy 16, elev 2563 ft, dr 765 ft; University 8, top salt 1255 ft, dr 1645 ft; University 9, top salt 1185 ft, dr 1810 ft; University 10, top salt 1225 ft, dr 2515 ft; Waddell 2, dr 115 ft. Humble O&R Co.'s University 9, elev 2577 ft, top salt 1137 ft, dr oil pay 2918 ft; University 10, dr 560 ft; University 11, rig. Independent O&G Co.'s University 3, rig; University 1-B, dr 205 ft. Ed-Landreth Prod. Corp.'s State 1, elev 2558 ft, top salt 1040 ft, dr 2700 ft; State 2, elev 2554 ft, top salt 1020 ft, dr 2595 ft; State 3, elev 2561 ft, top salt 1065 ft, dr 2085 ft; State 4, elev 2557 ft, top salt 1035 ft, dr 1730 ft; State 5, elev 2564 ft, top salt 1060 ft, dr 2085 ft; State 6, elev 2563 ft, dr 1270 ft. Magnolia Pet. Co.'s University-Hardwick 2, elev 2566 ft, top salt 1065 ft, dr 2935 ft; University-Hardwick 3, 7, 8 and 9, rigs; University-Lassiter 3 and 4, rigs; University-Lassiter 3 and 4, rigs; University-O'Keefe 6, dr 2910 ft; O'Keefe 10, lcn. Prairie's University-Lassiter 2, rig; University 7-A, lcn. Simms & Atlantic's University 8-A, fsh 2780 ft; University 9-A, dr 1165 ft; University 3-C, top salt 1125 ft, dr 2115 ft; University 4-C, dr 350 ft; University 5-C, dr 890 ft; University 6-C, rig; University 2-D, top salt 1075 ft, dr 2710 ft; University 1-E, rig. Tidal & Turman-Maxwell's University 5-F, dr 1375 ft; University 6-F, dr 950 ft; University 1-I, dr 1485 ft; University 2-I, lcn.

CROCKETT COUNTY—V. T. Bolin & Co.'s P. O. Coates 1, sd 2110 ft, Cumberland O&G Co.'s Couch 1, sd 3075 ft. Cromwell's Powell 4, dry and abn 3345 ft. W. W. Donnelly & J. D. Young et al's Pierce 1, elev 2105 ft, sd 1375 ft; Shannon 1, sp and sd. Humble O&R Co.'s Powell 2-B, dr 610 ft. Wm. Schaffer et al's University 2, dr 755 ft. P. H. Williams et al's Powell 1, elev 2723 ft, top salt 1052 ft, top lime 2466 ft, flow 345 bbls oil 2575-90 ft. World Oil Co.'s Schneeman 1, sd 2575 ft.

JEFF DAVIS COUNTY — Humble O&R Co.'s C. Flores 1, crooked hole 300 ft. J. K. Hughes Dev. Co.'s J. S. Means 1, co with hfw 3075-85 ft.

ECTOR COUNTY — J. S. Cosden et al's Connell 2-A, elev 2849 ft, top salt 870 ft, dr lime and anhydrite 3086 ft; Connell 3-A, top salt 863 ft, dr 2840 ft.

FISHER COUNTY—Barbour Oil Co.'s Cross 1-A, elev 1890 ft, dr 2770 ft. Ideal Oil Co.'s Jameson 1, sd 2705 ft. Marland's Hodges 1, plugging 3991 ft. Marland & Miley Oil Co.'s W. W. Ammons 1, dr 285 ft. Marland & Texon's McCall 1, rig. Marland & Vacuum Oil Co.'s Lagow 1, dr 2260 ft. R. W. Rainey et al's Marberry 2, sd hfw 2725 ft. Sinclair O&G Co.'s Denise 1, sd 565 ft. Stearnes &

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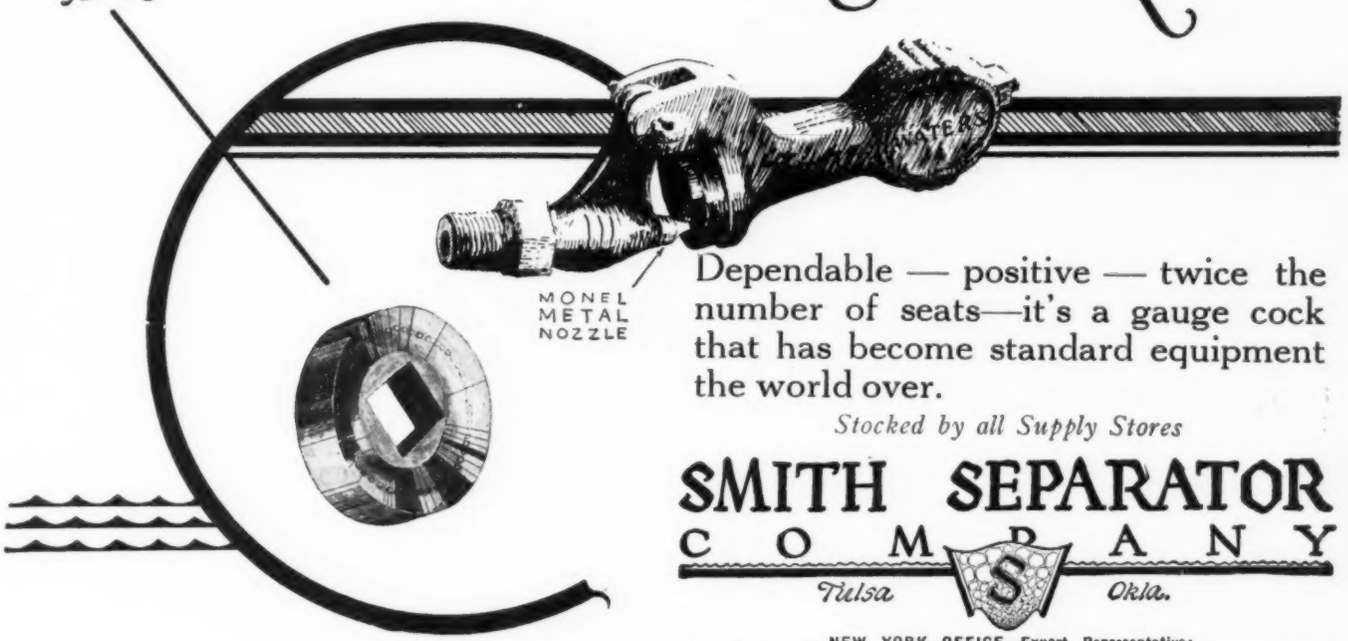

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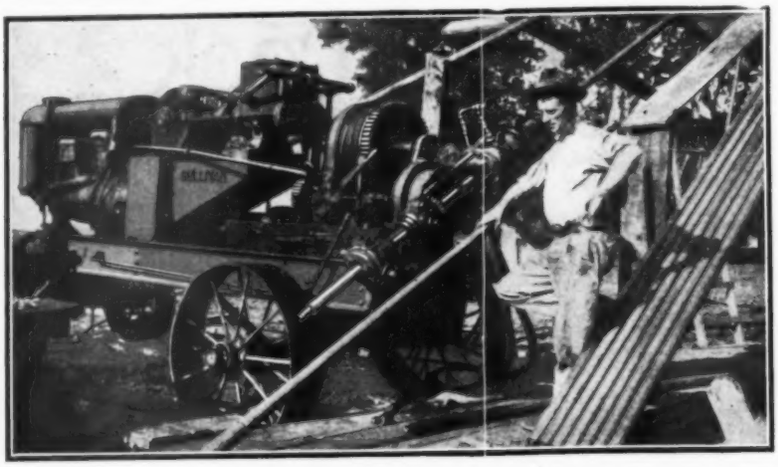

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Suppose you want to intercept fractures through which oil may be seeping up from lower formation. Suppose the formation pitches, or dips, so that vertical drilling will break up the strata as it passes from one to the next?

With the Diamond Drill it is easy, since this machine is designed to drill and take core at any angle of the 360 degrees.

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The photograph shows a Sullivan "CN" 1000 ft. mounted, Buda engine powered, hydraulic feed, Diamond Drill boring a hole at 30 degrees from the horizontal not far from Tampico, Mexico. In this work, boring in soft shale, the machine is doing rapid and accurate work, covering a high percentage of core.

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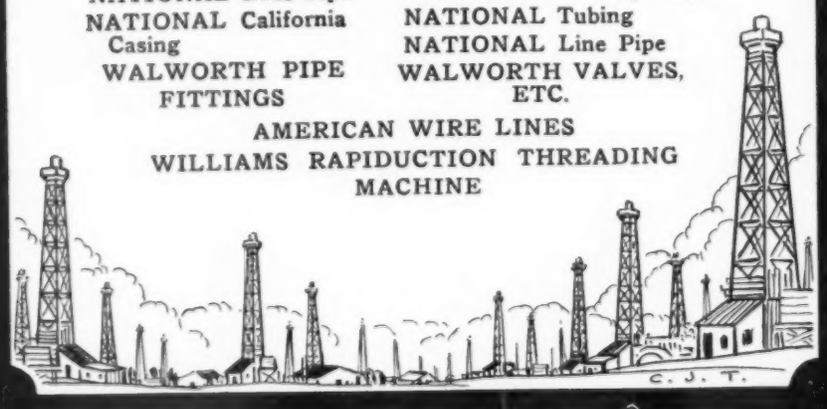

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PEDEN IRON & STEEL CO.
HOUSTON – SANANTONIO – SHREVEPORT

Streeter's Howe 1, dr 3630 ft. The Texas Co.'s Stevens 1, set 12½ in. 731 ft.

GAINES COUNTY—Westheimer & Daube's Forbes 1, dr rotary 2050 ft.

GARZA COUNTY—Emerald Oil Co.'s Boren 1, sd 2600 ft. Pandem Oil Corp.'s Justice 1, rig.

GLASSCOCK COUNTY — The California Co.'s W. B. Currie 1, lcn. F. M. Green et al's Oxshear 1, elev 2540 ft, sd 200 ft. Landreth Prod. Corp.'s Houston 1, dk. Merriwether & World Oil Co.'s McDowell 1, dr 310 ft. R. R. Penn & Julian Pet. Corp.'s Edwards 1, elev 2502 ft, top salt 1295 ft, ur with hfw 1935 ft. Sid Richardson and Ted Collins' Forbes 1, dr 600 ft.

TOM GREEN COUNTY—H. D. Camp et al's Wilkey 1, dr 350 ft. Fitzgerald & Taliaferro's Bennett 1, sp and sd. Marland Oil Co.'s Llano 1, sd 3000 ft.

HOCKLEY COUNTY — El Capitan Oil Co.'s Ellwood 1-A, sd 1520 ft.

HOWARD COUNTY — Bowers et al's C. Jones 1, elev 2218 ft, sd 500 ft. Fred Carey et al's Chalk 2, sd 1040 ft. Comet Pet. Co.'s Clay 2, dr 1530 ft. W. W. Donnelly & Mann's Martin 1, elev 2761 ft, top salt 960 ft, dr 1535 ft. F. H. E. Oil Co.'s Roberts 1, testing oil pay 1844-64 ft. Gulf Prod. Co.'s Chalk 3, cased off ¶7, co 1860 ft. Godley O&G Co.'s Hooks 1, cmt cas 1749 ft. L. C. Harrison et al's Roberts 1, sd 720 ft. Magnolia's Kelly-Chalk 4, dr 100 ft; Chalk 7, dr 1255 ft; Mary Chalk 5, ur 865 ft; Sloan-Chalk 3, ur 1040 ft; Sloan-Chalk 4, dr 905 ft. Marland Oil Co.'s Chalk 5-A, sd 1628 ft; Clay 1-C, sd 1817 ft; Clay 1-D, sd 2130 ft; A. M. Fisher 1, elev 2740 ft, sd 250 ft; Marland & F. P. Zoch's Guitar Ranch 1, elev 2517 ft, top salt 1155 ft, show oil 3157 ft, dr 3200 ft; Jones 1, sd 500 ft. Mid-West Exploration Co.'s Clay 2, ur 12½ in. 640 ft. Owen-Sloan et al's Roberts 1, dr 1400 ft. Pure Oil Co.'s Chalk 1, dr 1735 ft; Hooks 1, cmt cas 1735 ft.

HUDSPETH COUNTY—Lockhart & Co.'s Gardner-Moseley 1, sd 140 ft.

JONES COUNTY—Bateman & Campbell's Southard 1, dr 2280 ft. F. P. Campbell & Mid-West Explo. Co.'s Herndon 1, bailed live oil 2485-89 ft. Cole & Hart's H. C. Hale 1, lcn. Hurley Oil Co. et al's Largent 1, dr 2910 ft. Gillette & Hickey's Young 1, sd 1450 ft. Grisham-Hunter et al's Williams 1, co 2980 ft. Hutson & Weaver's Smith 1, sd 700 ft. Kirk & Brewer's Milsap 1, sd 2500 ft. Manhattan Oil Co.'s S. W. King 1, sd 1500 ft. Marsten Oil Co.'s Howell 1, sd 2545 ft; Swan 1, dr 2635 ft. Mid-Continent Oil Co.'s H. Evans 1, sd 3021 ft. W. G. Stough et al's Willis 1, co 1275 ft. Phillips Pet. Co.'s Vestal 1, ur 2200 ft; Winters 4, dr 2415 ft. Swensondale Oil Co.'s Canton 1, sd 1665 ft. J. L. Tomberlin et al's Clapp 1, set 8¼ in. 1555 ft. World Oil Co.'s Boyd 1, sd 2615 ft.

KENT COUNTY—Douglas Oil Co.'s Scoggins 1, sd 2620 ft. Marland & Texon's Bilby 1, lcn.

KING COUNTY — Gibson-Johnson et al's Burnett 1, elev 1715 ft, sd 2335 ft. The California Co.'s Spikes 1, lcn. Mid-West Explo. Co.'s Patton 1, elev 1706 ft, dr 1685 ft. Phillips Pet. Co.'s Burnett 1, elev 1820 ft, set 6⅝ in. 3140 ft. Sinclair O&G Co.'s Burnett 1, elev 1804 ft, dr 2175 ft. Pattison et al's Patton 1, elev 1616 ft, sd 2065 ft. White Eagle O&R Co.'s Burnett 1, elev 1818 ft, dr 2530 ft.

LOVING COUNTY — Owen-Sloan et al's et al's Johnson 1, elev 2934 ft, sd 930 ft. Kingwood Oil Co.'s Moore 1, elev 3120 ft, top salt 1210 ft, dr 1845 ft.

MIDLAND COUNTY — Orbit Oil Co.'s Moreland 1, lcn.

MITCHELL COUNTY—The California Co.'s Foster 3, dr 1475 ft. Magnolia's Mary Foster 4, hfw 3240-50 ft, plugged back for shot 2890 ft; McKinney 1, dr 3120 ft; Watson 2, dr 3605 ft. Paul Teas et al's Ed. Strain 1, sd 3510 ft. Thraves et al's C. Way 1, sp. Tex-O-Kan Oil Co. & Thraves' W. F. Sanders 1, sp and sd.

NOLAN COUNTY—Phillips Pet. Co.'s Scott 1, co 3085 ft. Thomas & Reynolds et al's Allen 1, dr 3455 ft. John Wonemiller Corp.'s Booth 1, sd 960 ft. Henry Zweifel et al's Longbotham 1, sd repairs 1685 ft.

PECOS COUNTY—Geo. Anderson et al's

Sherbino 1, lcn. Allsman & Bell et al's River Bed 1, top salt 450 ft, sr 850 ft. Buell-Hagen et al's Jasper 1, lcn; Batchelor 1, elev 3136 ft, co 2740 ft. The California Co.'s Cordova Union Fee 1, dd, set 8⅝ in 1870 ft. Cromwell & Kimberlin's Blackman-Schraff 1, plugged back from 2126 to 1985 ft for shot. Diamond Pet Co.'s Blackstone-Slaughter 1, lcn. T. R. Cowell's J. C. Trees 1, fsh 3115 ft. M. C. Dibble et al's Bonebrake 1, sp and sd. John Droppleman et al's Hersheusen 1, dr 2545 ft. Bob Elmore et al's M. Holmes 1, elev 2176 ft, set 12½ in. 105 ft. R. F. Garland & Co.'s El Paso Fee 1, machine. Kershaw & Livingston's Cannon 1, lcn. Mazda Oil Co.'s Smith 1, lcn. Mid-Kansas & Transcontinental's Smith-Taylor 1, elev 2645 ft, top lime 710 ft, flowed 175 bbls oil per hour 1185-1271 ft; I. G. Yates 5-A, machine; Yates 6-A, dr 95 ft; Yates 7-A, lcn; Yates 2-B, dr 345 ft. Moutray Oil Co.'s A. G. Robertson 1, machine. Olean Pet. Co.'s A. Harral 1,; G. A. Harrel 1 and Sherbino 1, lcns. Red Bank Oil Co.'s A. Harral 1, machine; McKenzie 1, rig. The Seventy-Five Oil Co.'s Perry 1, top salt 835 ft, dr 1200 ft. W. R. Shankel et al's Yates 1, elev 2200 ft, top salt 425 ft, sd 900 ft. Simms Oil Co.'s A. J. Devlin 1, lcn. Texon Oil & Land Co.'s Yates 2, top salt 430 ft, sd 1652 ft. Texon & Marland's Blakesley 1, elev 2353 ft, top salt 840 ft, flow sulphur water 2110-90 ft. Quinby Oil Co.'s Bennett 2, sd 1457 ft; A. A. Gray 1, sd 660 ft. World Oil Co.'s M. Serf 1, lcn.

PRESIDIO COUNTY—Hadlock & Miller's Tootle 1, elev 2912 ft, co 2550 ft.

REAGAN COUNTY—Henshaw & Camp's University 1, rig. Tidal Oil Co.'s University 1, elev 2819 ft, top salt 1302 ft, dr 2735 ft.

REEVES COUNTY—Deep Rock Oil Co.'s Caldwell 1, dr 3740 ft. Humble O&R Co.'s T&P Fee 1-B, dr 2280 ft. Exploration Co.'s Kinney 1, sp and sd. World Oil Co.'s Duff 1-A, co 1400 ft; Biggs-Holder 1-A, sd 1610 ft.

RUNNELS COUNTY — Ladd-Hill et al's McMillan 1, dr 2035 ft. Noble O&G Co.'s Simms 1, sp and sd.

SCHLEICHER COUNTY—Tom Gray et al's Robinson 1, dr 936 ft. General Security Co.'s Whitten 1, lcn.

SCURRY COUNTY—The Northwest Co.'s Stinson 1, elev 2225 ft, dr 4445 ft.

STERLING COUNTY—Bill Little et al's Gisher 1, sp and sd. Orr et al's N. Reed 1, rig. P. H. Williams et al's Clark 1, sd 1089 ft. Inland Oil Co.'s Durham 1, lcn.

STONEWALL COUNTY—R. F. Garland & Co.'s Ward 1, dr 1980 ft. Peer Corp. & J. P. Johnson's Murrow 1, lcn.

TAYLOR COUNTY — Brown Prod. Co.'s Henslee 1, sd 240 ft. Humble O&R Co.'s Mattie Jacobs 1, dr 2425 ft. Dorning & Perrine's Hammer 1, sd 455 ft. Halbert et al's Hunt 1, sd 1960 ft. Gilbert Johnson et al's C. M. Brown 1, lcn. Mid-West Explo. Co.'s Toombes 1, fsh in hfw 2580 ft. Morrison-Thompson et al's Rose 1, dr by cas 2539 ft. Owen & Sloan's Latimer 1, dr 1455 ft. Roeser-Pendleton, Inc.'s Sam Butman 1, sd 710 ft. Sanger O&R Co.'s Ike Brown 1, sd 1900 ft; Stem 1, lcn. World Oil Co.'s Griffin 1, co 2120 ft.

UPTON COUNTY—Beatty et al's Lane 1, elev 2677 ft, top salt 880 ft, dr 3406 ft. W. W. Donnelly & Marland's University 1, elev 2884 ft, top salt 1550 ft, dr 3815 ft. Hults & Curtis et al's Giddings 1, co 3615 ft. Marland & Levi Smith's University 1, rig. Simms Oil Co.'s B. C. Clark 1, elev 2469 ft, top salt 440 ft, top lime 1715 ft, sr 1900 ft. The Texas Co.'s Perry 1, elev 2513 ft, top salt 500 ft, top lime 1872 ft, flowed 125 bbls oil 1965-2037 ft.

VAL VERDE COUNTY—Douglas Oil Co.'s Sellars 1, rig burned, td 2940 ft. East Del Rio Oil Co.'s Russell-Whitehead 1, sd 3142 ft. Magnolia Pet. Co.'s Whitehead 1, dr 165 ft. S. A. McCaskeys' Sellars 1, dr 2635 ft. O. O. Owens et al's Mills 1, fsh 2440 ft. E. T. Williams et al's Holman-McNutt 1, fsh 2940 ft.

WARD COUNTY—Marand's Sealy 1, elev 2820 ft, top salt 1070 ft, dr 3345 ft.

WINKLER COUNTY—Atlantic Oil Prod. Co.'s Hendricks 1, elev 2823 ft, dr 150 ft. Champlin Ref. Co. et al's Cowden-Means 1, elev 2889 ft, top salt 1705 ft, water trouble 2440 ft. Gulf's Hendricks 2, rig; Hendricks

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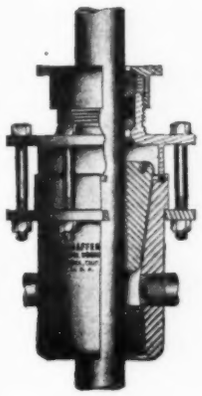

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3, dr 135 ft; Hendricks 4, dr 1140 ft; Hendricks 5, dr 710 ft; Hendricks 6, 1480 ft; Hendricks 7, dr 270. Hill et al's Ambrugey 1, sd 3447 ft. Humble O&R Co.'s Hendricks 1, rig; Hendricks 1, Group 2, elev 2823 ft, fsh tools 820 ft. Independent O&G Co.'s Hendricks 1, plugged back from 3095 to 3079 ft and shot, co to pump; Hendricks 2, lcn; Hendricks 1-A, elev 2816 ft, dr 660 ft; Hendricks 2-A, rig Llano Oil Co. & Roxana's Scarborough 1, elev 2943 ft, top salt 1115 ft, pay at 2992-3093 ft, lowered 8½ in. to bottom. McCulloch Oil Co. & Marland's Tobe Morton 1, elev 2750 ft, sd 1980 ft. R. S. Matthews et al's Cowden 1-A, sd 525 ft. Pure Oil Co.'s Bank Fee 1, elev 2823 ft, top salt 1525 ft, fsh 1552 ft; Bank Fee 2, top salt 1512 ft, dr rotary 2005 ft. Skelly Oil Co.'s Leeman 1, elev 2951 ft, top salt 1167 ft, dr 4440 ft. Southern Crude Oil Pur. Co.'s Hendricks 1-B, elev 2854 ft, dr 2365 ft; Hendricks 3-C, elev 2816 ft, top salt 1870 ft, stdz 2514 ft; Hendricks 4-C, dr 1660 ft; Hendricks 1-F, rig. Texon Oil & Land Co.'s Bank Fee 1, elev 2826 ft, dr 580 ft. White Eagle O&R Co.'s R. A. Leck 1, elev 2830 ft, cas trouble 940 ft. Texas Prod. Co.'s Rhodes 1 (New Mexico) elev 3020 ft, top salt 1140 ft, fsh tools in gas pocket 2850 ft.

EAST TEXAS

ANDERSON COUNTY—Humble's Hasal 1, Posey, dr 4418 ft, sand and bldrs, slight. Cosden et al's No. 1 Douglas, show, lcn.

CHEROKEE COUNTY—Humble's Reynolds Mtg. Co. 1, Boggy Creek, fsh, 3345 ft; Earle & Ragsdale 2, dr 3890 ft. Magnolia's Sumners 1, Ponta, prep to test 4323-29 ft. Panhandle Oil Co.'s Wayland 1, Mt. Selmon, rigging up. Nichols et al's Hill 2, Alto, sd 800 ft. Kirby Pet. Co.'s Comer-Seisson 1, 8 mi e Rusk, dr 252 ft, set and cmtd 15½ in. cas.

FREESTONE COUNTY—Rosser Pet. Co.'s Woods 1, Simsborough, sd 4318 ft. Orbitt Oil Co.'s Colman 1, 3 mi e Simsborough, bailed salt water 3352 ft.

HOUSTON—Porter et al's Austin 4, dr 2100 ft, rock. Texas Co.'s Houston County Coal & Mfg Co. 1, Lovelady, rigging up.

TYLER — Cheasman & Reynolds' Stone 1, abn 3240 ft; Stone 2 ,dr 1720 ft, reported show of oil at 440 ft.

COMPLETIONS

(Continued from page 62)

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
WEBB COUNTY—		
Killiam-Maddox, Bruni 1, sur 4, blk 5	¶	2137
ARCHER COUNTY		
L. T. Burns et al, Taber 1	*	1518
Consolidated Oil Co., Thomas 1	*	1205
Cullum-Perkins & Continental Oil Co., Wilson 3	40	1246
Pace & Nelson Holding Co., Miller 7-B	10	911
Royal Pet. Co., Wilson 6	20	1538
BROWN COUNTY		
Baker et al, Smith 1	*	635
Gordon-White et al, Brown 1	*	1455
J. K. Hughes Dev. Co., Shore 26	1200	1296
McCarty Oil Co. (was Tower & McKanna), Shore 12	600	1328
Shore 19	1000	1317
Phillips Pet. Co., Hickman 6	200	1232
Shoup et al, Ratliff 1	*	1500
The Texas Co., Lowe 50	250	1301
Lowe 54	200	1285
Lowe 58	100	1323
Lowe 60	320	1315
Lowe 64	165	1282
Wentz Oil Corp., Shore 17	390	1330
CALLAHAN COUNTY		
Beams & Kingwood, Jackson 1-B	15	930
Navarro Oil Co., Bennett-Booth 2	*	1753
Richardson Bros. et al, Cutbirth 1	*	2806
Sikes et al, Owen 1	*	1050
Texas Co., Clifford 14	*	2160
CARSON COUNTY		
Empire G. & F. Co., Magnolia Fee 2-A	260	3172
J. K. Hughes Dev. Co., Percival 2	200	3145

Company, Well and Location	Initial Production Bbls.	Depth
Magnolia Pet. Co. Fee 2	170	3171
Marland Oil Co., Garner 2	25	3175
J. T. Parks et al, J. L. Noel 2	10	3290
Prairie O. & G. Co., Bryan 1, shot	¶10	3302
Bryan 2	*	410
Prairie-Marland, McConnell 1	260	3180
McConnell 2	450	3149
CLAY COUNTY		
Rounsville et al Barry 1	*	1000
Stump & Co., Boddy 1	*	1300
COOKE COUNTY		
Camp-Hedrick & Oil Operators Trust, Kleiss 5	165	1665
Oil Operators Trust, Ben Luke 4	140	1641
Sowell Bros. et al, Mitchell 1	*	2392
Stroube & Stroube, Koelzer 3-A	300	1641
Koelzer 2-B	200	1668
CORSICANA-POWELL		
Magnolia., Hardy-Halbert 2	*	3292
Castle Oil Co., Fee 1-B	*	3408
CRANE COUNTY		
Magnolia, University-Hardwick 5, shot	450	2958
University-O'Keefe 9, shot	300	2966
Simms & Atlantic, University 2-C	2350	3002
The Texas Co., University 1, shot	500	2982
Tidal & Turman-Maxwell, University 2-H, shot	65	3076
CROCKETT COUNTY		
P. H. Williams et al, Powell 1	345	3590
ELECTRA		
Bailey & Damuth Dr. Co., Waggoner 12	†	1875
C. H. Clark et al, Waggoner 4	*	1800
John O' Neil, Allingham 1-B	*	2255
EASTLAND COUNTY		
Morrison & Everly, Harrell 1	*	1500
Root et al, Ray 2	*	2050
HOWARD COUNTY		
Pure Oil Co., Chalk 3	290	1671
GRAY COUNTY		
Pure Oil Co., H. M. Davis 5	200	3230
Wilcox O. & G. Co., Worley-Reynolds 23	30	3035
HUTCHINSON COUNTY		
Devonian Oil Co., Johnson 7, shot	30	2978
Herrogan Oil Co., Cockrell 1, shot	360	3020
Phillips Pet. Co., Kingsland-Lansing 5, shot	100	2760
J. Kingsland-Gibson 3, shot	100	2981
Perkins-George 7, shot	125	2905
Prairie & Phillips Pet. Co., Johnson 54-A	200	2934
Johnson 60-A	20	2967
Pure Oil Co., Johnson 5-B, shot	550	2931
W. R. White et al, Cockrell 1, shot	150	3035
Wiles & Keech, Smith 1, shot	300	2896
JACK COUNTY		
Seaboard O. & G. Co., Cullers 5	35	2030
K-M-A AND IOWA PARK		
Beaver Drilling Co., Chilton 1	*	1830
Holman Cook & Reeder, Chilton 1	*	710
Cooper-McLaughlin, Love 7	30	1820
Pet. Producers Co. Love 8-B	15	499
Munger 1	25	1055
Wilson Drilling Co. K. & K. 2	*	735
MITCHELL COUNTY		
The California Co., Swenson 2	75	3080
MONTAGUE COUNTY		
Arco Oil Co., Maddox 1-B	55	928
Bridwell-Heydrick, Crenshaw 1	*	3417
Continental Oil Co., Jones 9	25	908
Maddox 21-A	45	928
McGinley et al, Gist 1	*	1652
SHACKELFORD COUNTY		
Mid-Tex Oil Co., Newell 1	*	1505
Roesser-Pendleton, Inc., Reynolds 1	*	1597
Tomberlin et al, Harvey 1	*	2250
SOUTH VERNON DISTRICT		
J. S. Cosden & Consolidated Oil Co., Waggoner 4	15	1251
Fain-McGaha Oil Corp., Waggoner 1-K	*	2044
Milham Corp., Waggoner 22-L	70	2391
Phillips Pet. Co., Waggoner 1-H	40	2384
Waggoner 6-WW	*	2726
Waggoner 6-Y	10	2428
UPTON COUNTY		
Gulf Prod. Co., J. F. Lane 1	‡1810	2014
The Texas Co., King 19	*	3165
TP Coal & Oil Co., Lane 8-A	800	2031
WHEELER COUNTY		
Gibson Oil Corp., Bentley 2	50	2351
YOUNG COUNTY		
Conner et al, McCluskey 4	*	2600
Holbrook & Woods, Davis 1	40	898
E. C. Stovall et al, Fee 6	1000	3935
Tidwell & Dorsey, Gray 1	*	1212

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Bradford Supply Opens Fort Worth Office

Fort Worth, Texas.—The Bradford Supply Company of Bradford, Penna. has established a branch sales office at 807 W. T. Waggoner Building, Fort Worth, with J. W. Foster in charge. Texas headquarters of the company are located at Wichita Falls, and five stores are maintained in North Texas fields, including a new one located recently at Muenster, Cooke County.

Railroad Projected

Denver, Colo.—There are rumors to the effect that a new railroad project connecting the oil and coal fields in northwestern Colorado with the Union Pacific railway at Wamsutter, Wyo., has been launched in this city, for which some $200,000,000 may be invested in the northwestern part of the State.

Form New Second Hand Supply Company

Fort Worth, Texas.—A new corporation known as L. A. Eberhardt, Inc., has been organized to take over the second hand supply business of the Longhart Supply Company. T. B. Hoffer, who is a well known Mid-Continent oil producer, is president of both concerns, which have headquarters on the ninth floor of the First National Bank Building, Fort Worth. The Longhart Supply Company will discontinue the second hand supply business under the new arrangement, and will devote all efforts in selling new equipment. L. A. Eberhardt is to remain on the board of directors of the Longhart Supply Company, while N. S. Longabaugh will be in active charge of the sales of the latter concern.

J. H. Williams Catalog

A new edition of J. H. Williams & Company catalog in pocket size form has recently been issued, and is said to contain considerable new information.

Of particular interest is the section which has been added showing the complete line of "Superrenches" (chrome-molybdenum steel.)

The catalog also contains the line of "Superrench" silent salesman display boards and "Superrench" sets. In addition it shows the new size of "Vulcan" tongs, No. 15½ for 16-inch pipe, a newly designed light service "C" Clamp line which provides a deeper throat, and it also covers the new standard finishes for drop-forged wrenches of carbon steel.

Copies of the catalog may be secured by writing the J. H. Williams Company, Buffalo, New York.

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R. H. Fash, B. S., Vice-President
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Tulsa Exposition Drops Carnival Features

Tulsa.—The Fourth International Petroleum Exposition to be held here September 24 to October 1 will be almost exclusively a scientific and technical show. There will be no parades, pageants, queens or princesses, and no cheap carnival attraction on the grounds. Instead, there will be many demonstrations of safety devices and spirited contests of skill, speed and unique methods of oil field mechanics.

With the letting of contracts for the removal of buildings to the new State Fair grounds, and the appointment of J. Burr Gibbons, former president of the Tulsa Chamber of Commerce, as general manager of the exposition, the big oil show began to take form this week.

Contracts for space andreservations by exhibitors already exceed the number made this far in advance of previous expositions, and indications are that the displays will exceed in variety and trade interest, those of previous oil shows, according to the management.

More advancement has been made in new equipment and new methods of field operations during the past five years than during the preceeding 15 years in the oil industry, and many important changes have taken place since the last show held in 1925.

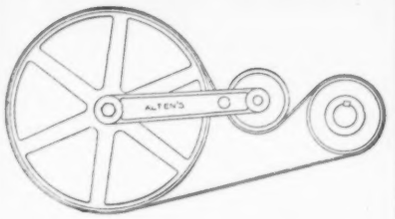
The value of the exposition to the industry is shown by the declaration made by one of the big producing companies in Tulsa this week that they had effected a saving of $140,000 in sixteen months from a single idea advanced by the exhibitors of the last show.

When the buildings are completed and the exhibit booths partitioned off, the management will send floor plans to all exhibitors requesting them to specify whether they desire electric, gas or water service for the operation and demonstration of equipment shown in their display. Exhibitors will specify what service they want and just exactly where they want the service openings located in their booths, and when they get ready to install their displays the service will be located exactly where they want it.

There will be but one admission charge at the exposition and that will be at the main gate.

Woman Heads Company

Tulsa.—The recently organized Murray Oil Company, capitalized at $15,000,000, is headed by one of the few woman oil operators in the oil industry, Mrs. Charles Murray being its president. Mrs. Murray is her own geologist, financial manager, and drilling superintendent. She dons the usual oil field attire and wades into the mud and dust of the oil fields to secure her own practical information.



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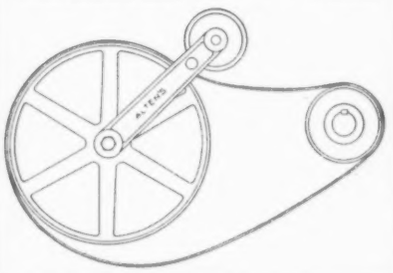

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619 Petroleum Bldg., Houston, Texas

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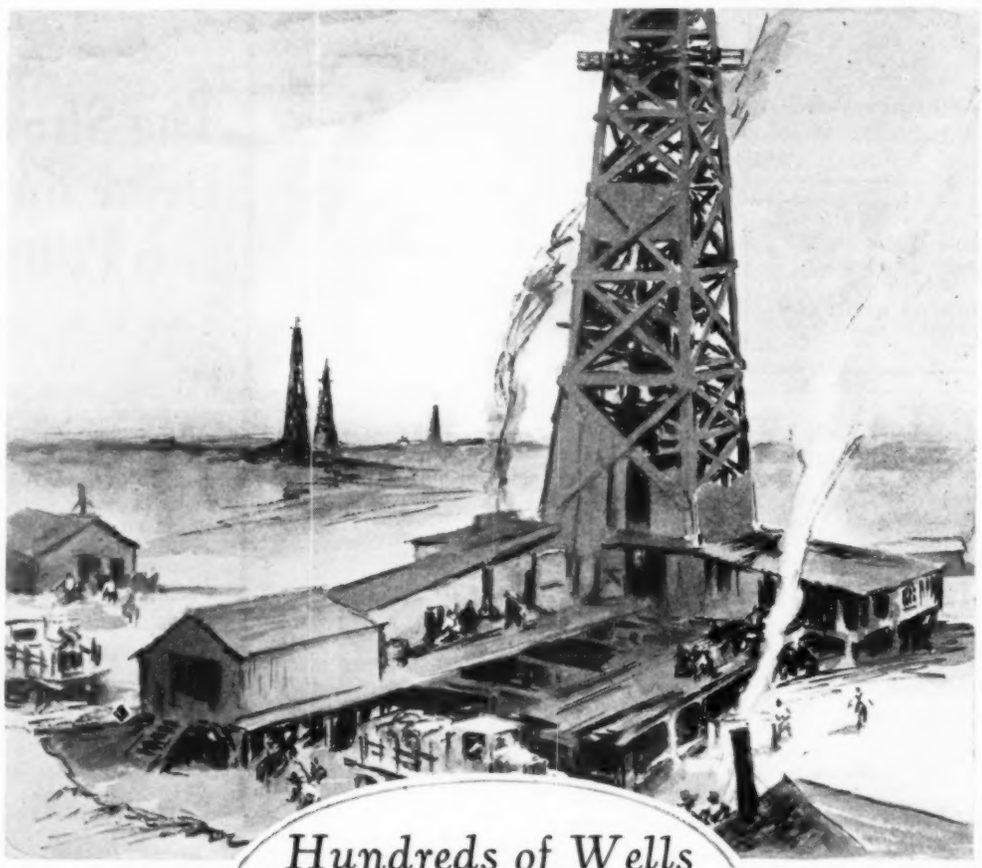

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Say you saw it in The OIL WEEKLY

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

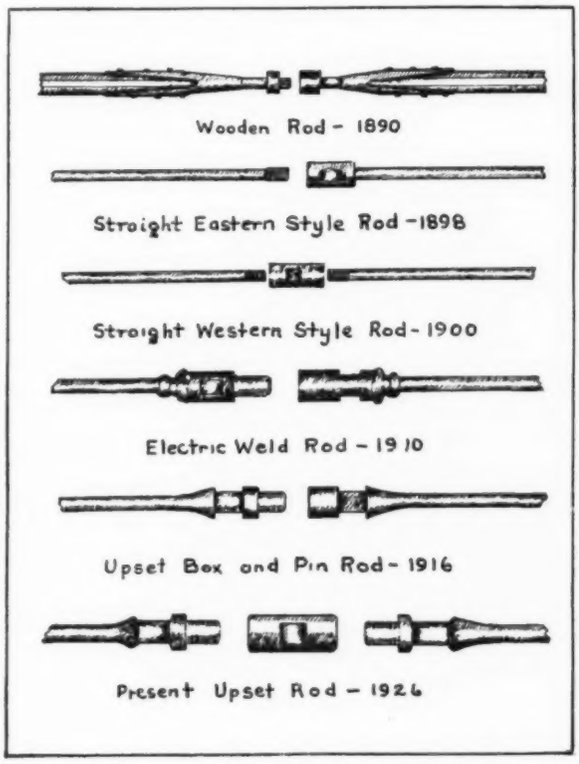
Manufacturing Better Sucker Rods

By H. E. CASSIDY
D. & B. Pump and Supply Company

SUCKER rods, like all equipment used in the production of oil, are being continually improved as a result of practical and scientific investigation. Theoretical and practical are now united through the labor of research departments maintained by manufactuers of oil well supplies who pride themselves on the quality of their product.

When in 1890, wooden sucker rods were first used in the Pennsylvania fields, California was not even considered as an oil state. At that particular period of California's history, her citizens were mostly interested in water wells. For that reason the majority of veterans of today, boys then, saw the first wooden sucker rods used, not in oil but water wells. The first so-called steel or in reality iron rods, were introduced in the East over thirty years ago. It was approximately six years later, however, before the steel rod came to be used in California. What is known as the straight Western style rod first made its appearance in the Kern River field, near Bakersfield. The Eastern and Western straight type rods were so distinctly different that the Western rod might be termed a new rod. The Eastern rod was constructed by simply upsetting the end of a steel bar in a malleable sleeve, while the Western rod was threaded with no shoulder at the end and joined by a round coupling or union. The malleable sleeve rod did not prove satisfactory because the constant whip and stress in the well loosened the upset and it swiveled, frequently pulling the box. The Western rod unscrewed so easily at the union that efforts were made to strengthen the connection by cupping the rod ends. This too proved a failure. To overcome these difficulties, the idea was conceived in 1910 that a rod end could be manufactured out of high quality steel welded by the use of electricity to the rod itself. As far as strength in the pin was concerned, the electric welded rod was in many cases highly satisfactory, but it frequently broke in the welds. It resisted fatigue and had tensile strength, yet the slowness of its manufacture and its weld breaks were points against its use. With this condition existent it was an easy matter for the upset rod to establish its supremacy over the welded rod when a machine for upsetting rods came into common use nine or 10 years ago. In the present upset rod, rod manufacturers have apparently reached the ultimate in pin design. The relative speed of the upset operation combined with the durability of the shoulder design in the fields, brands the present rod as one which will remain upon the market many years.

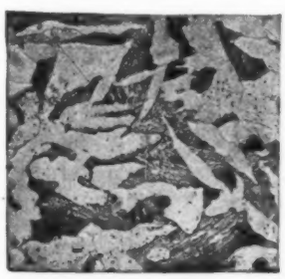
With the passing of every day, oil wells throughout the United States are being drilled to increased depths. Few of these wells are absolutely straight and in many, sand and water increase the difficulty of pumping. The need for better sucker rod steel which will stand up under the vibratory shocks constantly encountered has become a challenge to the engineering and metallurgical profession.


Wooden Rod - 1890
Straight Eastern Style Rod -1898
Straight Western Style Rod - 1900
Electric Weld Rod - 1910
Upset Box and Pin Rod - 1916
Present Upset Rod - 1926

Steel that was once of adequate strength to pump the deepest well on record is no longer equal to the task. After months of experimentation and scientific study, a new rod steel has been produced by the D & B Pump and Supply Company, which is standing up in the deepest oil wells. This new steel has been made possible through the application of the science of heat treatment with its increased powers of fatigue resistance.

To strengthen steel it is necessary that the grain structure be changed and photomicrographs of untreated and treated rod material herewith clearly illustrate the vast improvement that has been made.

Operators universally agree that the majority of rod troubles are caused by pin breaks and metallurgists agree in turn that these pin breaks are fatigue failures. This term "fatigue" will be treated with a little later on, yet the term itself does not seem to be a suitable one, for in reality sucker rod pins do not get tired. The real answer lies in the fact that if any steel is subjected to alternating stresses a sufficient number of times, it will break, although the stresses may be far below the physical limits of the steel. Consequently it is easy to see that the stronger the steel, the higher the safe working stresses. Sucker rods can be strengthened by using a larger percentage of carbon in the steel, but to do so is to increase the rod's brittleness,



PHOTOGRAPH NO. 1, magnified one thousand times, then reduced to one-third original size. D+B rod pin before treatment. Structure is "Ferrite" (light constituent) and "Pearlite" (dark laminated).

PHOTOGRAPH NO. 2, magnified one thousand times, then reduced one third original size. D+B Heatreat rod pin. The new structure has an ultimate strength of one hundred thousand pounds per square inch and greatly resists fatigue failure.

Molecular over-growth illustrated in rod stock

Heat treating has reduced both the grain size and brittleness

meaning, of course, that as soon as the rod string starts to vibrate or whip, the pins will fracture.

As far as 0.25 to 0.35 carbon steel is concerned there is no soft forging steel which responds so readily to welding, forging and machining and no steel is so vastly improved by proper heat treatment.

Bullens, in his book, "Steel and Its Heat Treatment" says: "Under skillful treatment the variety of combinations of strength and ductility are to be had in probably no other range of carbons. Relative to static strength, some really wonderful results in the way of high tensile strength with high ductility have been obtained from heat treated, quenched and toughened forgings from 0.30 to 0.35 carbon steel." The following results obtained from 32 per cent carbon acid steel gives an idea of the extent to which proper heat treating may develop physical properties.

Tensile strength, lbs. per square inch	91,700
Elastic Limits, lbs. per square inch	61,620
Elongation per cent in 2-in.	33.5
Reduction of area per cent.	48.1

In the hardened condition—without subsequent tempering—this steel may be satisfactorily used for gears. In the toughened condition these steels represent the maximum resistance to fatigue and other dynamic stresses over any other carbon steel. The dynamic strength probably apexes at about 30 per cent carbon as far as Bullens can judge from his own researches and the conclusions of others.

When viewed under the microscope, slowly cooled steel of the grade such as used in sucker rods, is found to consist of two constituents. One of these constituents is of a light color and is nearly pure iron, while the other is dark gray with a laminated or platy structure. Photo No. 1 clearly shows the presence of these two constituents in an untreated sample of sucker rod steel.

All of the carbon in a steel which has been slowly cooled, resides in the form of iron carbide plates laminated with plates of pure iron. This laminated constituent is called "pearlite." The light areas, previously mentioned are called "ferrite."

Technical study of pin breakage has proven that failure is, as has already been stated, nearly always caused by fatigue. A study of this fatigue in turn would go to prove that the crack which precedes the actual failure can travel most easily through the soft light color pure iron constituent which occurs in the slowly cooled steel such as is shown in Photo No. 1.

The special method of treatment used by D & B metallurgists has accomplished two very important objects: First, the weak pure iron constituent has been very largely eliminated from the steel thereby lessening the tendency to fatigue failure. Secondly, by so doing, the ultimate strength of the steel has been greatly increased but without any increase in brittleness.

Photo No. 2 illustrates the structure of a sucker rod pin which has undergone heat treatment. This change in structure is easy to trace and gives an ultimate strength under test of one hundred thousand pounds per square inch. In addition this heat treated rod stock can be cold bent flat without a sign of a crack. Actual well tests on approximately one million feet of the new rod over a period of four months shows a perfect record of not one pin break.

Rods with pins as strong as high carbon steel but as ductile and tough on the other hand as steel of a low carbon content, are being produced. In other words, the safe working stresses have been raised approximately 200 per cent without a sacrifice of ductility.

The vital elements in a successful manufacture of sucker rods can be divided into three parts:

1. Steel Analysis:
   a—Rod failures due to steel structure.
   b—Metallurgy applied to Sucker Rods.
2. Heat Control:
   a—In forging the upset.
   b—In treating the rod.
3. Pin Design:
   a—Size of Shoulder and Pin.
   b—Type of thread.

The outstanding feature in the deacon's construction of the famed "One Hoss Shay" was the care taken in the selection of the materials used. Rod manufacturers today are emulating the deacon's example.

Years of experimentation and hunderds of tests lie behind the steel specifications of every D+D rod. The majority of the metallurgical engineers are united in the belief that tensile strength is not the major consideration in the testing of steel. Sucker rod breaks are in some cases the result of field abuse or poor forged ends. Most breaks however are fatigue and fatigue tests are important in determining the nature and condition of the steel to be used.

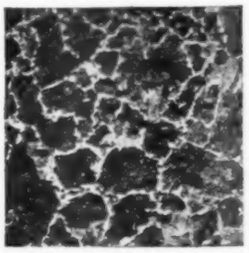
Definition of Fatigue

The commonly accepted definition of the word "fatigue" is weariness and loss of strength to a point where there is no power to continue further work. This definition is not a happy one when applied to metals. Study has shown that failure by so called "fatigue" is brought about by conditions which do not affect the metals as a whole but rather start a fracture at some particular point. The fracture thus formed then follows paths of easiest rupture until complete failure occurs. Stoughton says that if repeated and alternative stresses are put up-

Handling rods carelessly on the walk results in plastic deformation.

Bent rods in which slip bends have occurred are past further use.

0.32 per cent carbon. Ferrite (white) and Pearlite (dark) X.75



0.57 per cent carbon. Ferrite and Pearlite X.75

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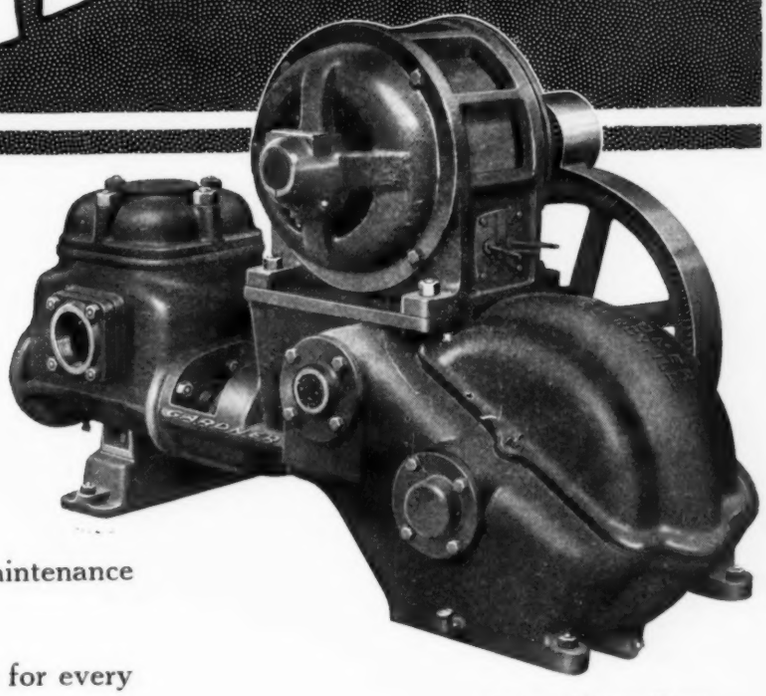

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Say you saw it in The OIL WEEKLY

on steel even though the load is far less than that which it can bear indefinitely, it will ultimately break down from what is known as "fatigue."

We may then define what are commonly called "fatigue failures," as really failures caused primarily by the effects of alternating stresses which are generally of a magnitude much below the actual elastic limit of the metal.

Early Investigations and Results

The first systematic investigation on the subject seems to have been carried out by A. Woehler about 1860. As a result of his very careful and painstaking work Woehler was enabled to enunciate two principles. He was able to show first that as the maximum stress applied is decreased, the number of application of load which the material can stand increases. Finally the load becomes so small that there is little danger of rupture within the life of the metal. The stress range at this point is called the "maximum safe range of stress." It should be remembered, however, that later researches have shown that any load, if only applied a sufficient number of times, will cause failure to occur.

The second principle which Woehler put forth was that as the maximum stress increases, the range of stress which can be safely endured, decreases. In other words, the safe loading depends on the range of stress applied and not on the maximum value of the stress. By "range of stress" is meant the algebraic difference between the maximum and minimum unit stresses applied.

In Woehler's experiments, the alternating stresses applied were equal in tension and compression. At about the same time as Woehler's experiments were published, Fairfield, Baker and Bauschinger experimented with cyclic variations of stress of unequal magnitude in tension and compression. Bauschinger deducted that alternating stress affected the elastic limit both in tension and compression, as determined under static loading and caused these points to take up new positions depending on the material and the ratio of compressive and tensional stresses. These new values he considered as bounding the maximum range of stress that could be applied to the material indefinitely without fracture.

The Crystallization Theory

It is still a very common belief that metals, and particularly steel, undergo a crystal enlargement or growth under conditions of vibration or fatigue at ordinary temperatures. Modern study has shown this not to be the case. It is, however, a fact that steel having a large crystal structure is weaker than steel of the same composition having a small crystal of grain size.

Stoughton (Metallurgy of Iron and Steel, 1923) state "I do not know of there ever having been any reliable proof offered that vibration has caused, or is capable of causing, large sized grain in steel. It may be possible, but the more we learn about the subject the more we are inclined to believe that improper manufacture is the cause, although the nature of the break is not disclosed until it occurs."

The advance of metallography has completely dispelled the illusion of this supposed form of grain growth. The observer may meet with many cases of failure in which a coarse grain is evident but the coarse grain was present before the article was put into service. Having this coarse grain, it was more likely to fail than similar articles having a finer grain size.

Modern Theory

Modern theory of fatigue failure is divided into two rather distinct doctrines. The first of these is sponsored by Rosenhein and is based on the amorphous metal hypothesis of Sir George T. Beilby.

Beilby's amorphous metal theory recognizes the existence of amorphous or non-crystalline solid metal. Many substances may be undercooled under proper conditions so that they present a non-crystalline state in which the molecular disposition in the solid is identical with that of the liquid and in which there is a complete absence of orderly disposition. In such cases no solidification of the cooling liquid takes place and no crystallization occurs. Instead the liquid gradually loses fluidity and becomes so viscous that it appears brittle. In such a state when the solid lacks the orderly symmetry of the molecules natural to the stable equilibrium, it is said to be amorphous. Glass and fused silica are familiar examples of this.

According to the amorphous theory, as steel passes through the transformation range and ferrite grains are formed from the austenite, the growing crystals interefere with each other's growth. Finally when the constituent crystals meet, thin films of residual material remain under conditions rendering them incapable of crystallization so that they under-cool and form an amorphous cement between the grains.

Late research using X-ray methods have shown that the so-called amorphous material is really as crystalline as the metal grains themselves and it is probable that the "amorphous" material is composed of ultra microscopic crystals. It is a fact, however, that this cementing material between the grains is stronger than the grains themselves. This is shown to be true by the fact that cold worked metal, in which the proportion of the so-called amorphous material is largely increased, is stronger than hot worked metal.

Rosenhein's Theory of Fatigue Failure

In the development of Rosenhein's theory it is assumed that slip bands form during the plastic deformation of a metal. It is probable that the plastic deformation of a crystalline substance can only take place in this manner. Under the microscope these planes of movement can be plainly seen and are called "slip bands."

The theory of fatigue failure as explained by this theory assumes that the damage to the metal occurs through causing some slight plastic deformation even though it is very slight and very localized. It may be supposed that during the first part of a load cycle the load is in tension. A slip occurs due to plastic deformation to accommodate the metal to the extension. If the load then reverses to compression the slip occurs in the opposite direction and if the cycle is continued the rubbing of the crystal faces form an abrasion which rubs off a few molecules of the crystals. The abraded material of molecular dimensions then exists as an extremely fine powder. When this action has continued through many reversals of stresses the powdered material may have accumulated to such an extent, on some of the planes where slipping has occurred most, that it will be squeezed out from between the gliding planes and thus form a crack or fissure. On the other hand some claim that sufficient heat is generated by friction to liquefy the debris while others think that the powder remains as single grains not larger than a single molecule.

If as previously suggested, the accumulated debris is finally squeezed out and a fissure or crack forms, a greater load would then be thrown on the crystal grains adjacent to one which had been weakened by the tiny crack. As a result the crack would spread and fracture ultimately occur.

It was found early in fatigue research that the application of alternating stresses caused liberation of heat. This was stated to be due to "molecular friction." In the low stress ranges very small amounts of heat were liberated which increased very little with increasing stresses. When a certain point in stress increase is reached, the heat generation is very large with a very slight increase in stress. This point seems to coincide with the safe range of stress.

This is taken to mean that up to a certain stress only elastic deformation takes place and no permanent damage is done to the metal. When this stress is exceeded, slippage takes place and if persisted it causes fracture as has been previously explained.

Merrils' Theory of Fatigue Failure

The second modern theory is that of F. S. Merrils. By means of an ingenious apparatus he was enabled to observe the metal specimen under the microscope only momentarily at the peak of the stress variation. By these methods he was able to seriously contravert the theories just enumerated. In no case was he able to observe the

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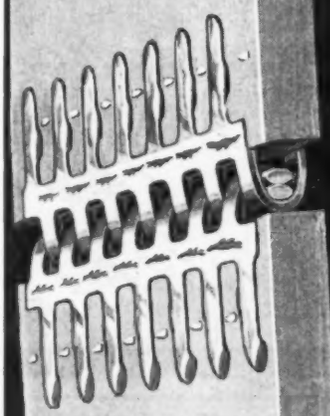

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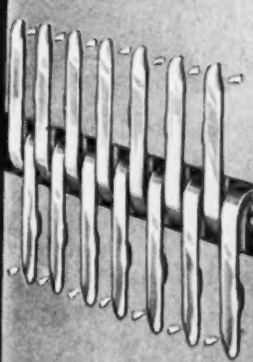

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Texas Oil Pump Company
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formation of slip bands on the surface of the specimen. Merrils maintains that the process of fatigue failure is not one of persistent weakening of the metal until the resistance to fracture is less than the applied load. He asserts that the original resistance of the metal remains unchanged but during stressing it accumulates load until there is sufficient to overcome its strength. This theory asserts that the metal acts as a reservoir of energy which it can store away. Most metals, at first—during what is understood as the elastic period—resist any absorption of energy and this resistance has to be broken down before the metal will begin to absorb the energy which will ultimately cause its failure.

It is quite apparent that the modern theories of fatigue failure in steel are far from convincing. Owing to the nature of the forces involved, exact determination of causes is a matter of great difficulty, although the effects are quite apparent. Some modifications of Rosenhein's theory may prove to be the key to the solution of the problem. Later researches on the constitution of the so-called "amorphous material" which apparently lies between the grains of steel have led to conclusions which make some modification of Rosenhein's theory imperative.

The lack of exact knowledge on the ultimate cause of fatigue is to be deplored. An exact knowledge of the cause would constitute a large step towards the solution of very serious problems in fatigue failure which face the engineering profession today.

(To be continued)

Peerless Supply Company Operating Own Plant

Tulsa.—With the recent installation of modern, electrically operated equipment for the manufacture of their complete line of oil field specialties, the Peerless Supply Company of Tulsa now is operating its own plant. W. H. McKissick is president of the company, E. G. (Ed) Blaylock is vice-president and E. A. Shaw is secretary and treasurer. All of these men are experienced in the manufacture and general supply business and are well known throughout the Mid-Continent field and other sections.

The company manufactures the McKissick safety type casing and tubing blocks from 20 to 40-inch inclusive. These blocks have a wide sale, embodying as they do safety features of exclusive design. In the Seminole field in Oklahoma the McKissick safety type block is in use by almost every company there. The Peerless Supply Company was organized in May, 1925, and the McKissick safety type block was introduced in October of that year.

The Peerless floating type stuffing box also has been developed by the company and is being manufactured in quantity production to meet the demand for this product. A bronze, two-piece sucker rod guide also is being sold by the company, this specialty possessing distinctive features that have developed a ready sale. This guide can be located anywhere on the rods.

A new type of swab now is being developed by the company which will be introduced shortly. This swab is designed to work in crooked holes without tearing off the rubbers.

The company also is developing a new type of sucker rod elevator that will embody new principles, according to company officials, and will feature simplicity and ease of operation.

Venezuela Supply Co.

Maracaibo, Venezuela.—The Maracaibo Specialties Company, Apartado No. 9, Maracaibo, has recently been formed to represent American manufacturers in the Maracaibo Basin oil fields.

The company is composed of E. H. Bishop, formerly warehouseman for Lago Petroleum Company, and Lyle Brush, formerly assistant field superintendent with Lago.

Lines of equipment already secured include Hughes, McEvoy, Cameron Iron Works, Abercrombie, Gulf Coast Machine and Supply Company, Mission Sales Company, with several others pending.

The company will handle material on a representation basis inasmuch as the high import duty on resalable goods is prohibitive to carrying stock. Companies can bring in equipment and supplies for their own consumption without duty.

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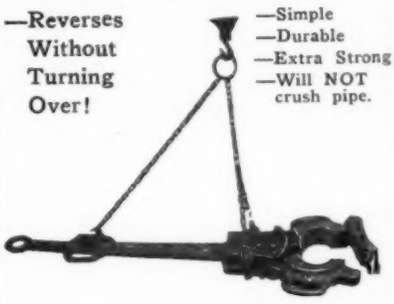

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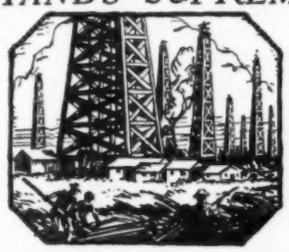

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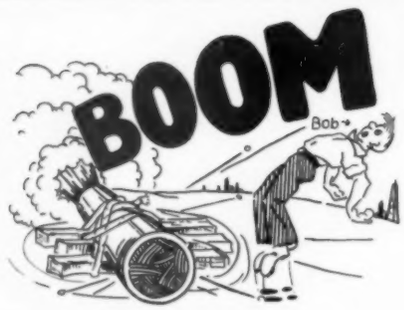

"PLENTY STRONG"

"Speakin' o' strength," ventured conversational Bill, well shooter, who was smoking in the engine house to keep out of the rain (and out of sight of the boss), "that American Seamless is the all-firedest, strongest stuff I ever seen in pipe."

"We were away down in Maracaibo one November, when 'long comes Armistice Day. There we were, out o'luck—nothin' to celebrate and nothing to celebrate with. We were beefin' a lot, when along comes Bob Adams, a goofy sort o' bird who served in the Coast Artillery during the war. And Bob had a bright idee."

"We'll take a section of 'American Seamless', mount it on a hillock nearby, fit a casing head for a breech, and have a cannon that for size and action will give those Venezuelans a treat, and for noise make the German's Big Bertha sound like a pop-gun", says Bob.

"To make a long story short, he did. We lashed that old pipe to a dozen deadmen with miles o' cable, rammed in a lot o' blastin' powder, ran his wires and batteries a rod or so aft, and pressed the button. Say lads, I'm here to say that there old cannon o' Bob's barked hell, fire and noise from both ends and in all directions, blowin' that casing head all over the landscape like a cast-iron cannon ball a huntin' for trouble. The old gun recoiled in all directions and spun around on its moorings like a pin wheel, but so help me, save for the regular holes at both ends, that there section of 'American Seamless' wasn't marred a bit—not a crack nor a scar. That's plenty strong, I'm here to state."

"Yah, dots fine", cut in Ole, who had more imagination than most Swedes, "Yust aft does casing head vos Bob Adams, vot about him?"

"Oh," drawled old Bill as he threw another match in the sump outside, "the casket had gold handles."

Yes, Gentlemen, American Seamless is "plenty strong" for oil country service. Pierced from solid billets of steel like a gun barrel. No seams . . . no welds . . . Get the facts in American Seamless literature.

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SQUEAKS FROM THE BULL WHEEL

Particular

Farmer (to druggist): "Now, be sure an' write plain on them bottles which is for the Jersey cow and which is for my wife. I don't want nothin' to 'appen to that Jersey cow."—Tid-Bits.

Short Changed

I sent my boy to college,
With a pat upon his back,
I spent ten thousand dollars,
And got a quarterback.

Independent Topics.

Not a Permanent Cure

Rastus brought a ham back to the store, saying it was no good.

"That ham's all right, Rastus," the storekeeper insisted. "Why it only was cured last week."

"Well, maybe it's been cured all right," Rastus answered, "but it sho' has had a relapse."

The young medico coughed rather gravely.

"I am very sorry to tell you," he said slowly, looking down at the very sick man in bed, "that there is no doubt you are suffering from scarlet fever, and, as you know, it is extremely contagious."

The patient slowly turned his head upon the pillow and looked toward his wife.

"Dearie," he said in a very faint voice, "if any of my creditors call, you can tell them at last that I am in a position to give them something."

"Bobby," said the lady in the street car, severely, "why don't you get up and give your seat to your father? Doesn't it pain you to see him reaching for the strap?"

"Not in the street car," replied Bobby, cheerfully.

Flip: "Tom talks all the time. He just rattles on like a second hand car."

Flap: "Yes, but his clutch is so different!"

"Why do you go on the balcony when I sing? Don't you like to hear me sing?"

"It isn't that. I want the neighbors to see that I am not beating you!"

A Scotch farmer had agreed to deliver twenty hens to the local market. Only nineteen, however, were sent, and it was almost evening before the twentieth bird was brought in by the farmer.

"Man," said the butcher, "you're late with this one."

"Aye," said the Scot, "but, ye see, she didna' lay until this afternoon."

"I call my girl Spearmint."

"Why, because she's so Wrigley?"

'No, she's always after meals!"

First it rained and then it blew,
Then it hailed and then it snew;
Then it friz and then it thew,
Then it hailed, blew, rained,
Snew, friz, and thew anew.

No Diplomat

Motorist (to lad he has given a lift) —You don't often get a ride in a fine car, do you?

Boy—No, sir. The swell ones always pass me up.—Chicago News.

One Sure Thing

"Henry, if I should die what would you do?" asked Mrs. Henry Peck.

"I don't know exactly what I would do," replied Henry, meekly, "but one thing I know I would do would be keep away from all spirit meetings.

Teacher: "What is a Laplander?"

Little Girl: "Please'm, it's an awkward passenger in a crowded street car."—Exchange.

Took Her Wrong

Salesman—Here is a very nice pistol, lady. It shoots nine times.

Fair Customer—Say, what do you think I am—a polygamist?

"Egotism is the anaesthetic nature gives to deaden the pain of being a damned fool."—Northern Headlight.

He: "See that man over there? He's a bombastic ass, a vacuous nonenity, a conceited humbug, a parasite, and an incumbrance to the earth!"

She: "Would you mind writing those down? He's my husband and I'd like to use them on him some time."

ANSWERS

1. Astra Romana led in 1926 with 55,263 tons per month.

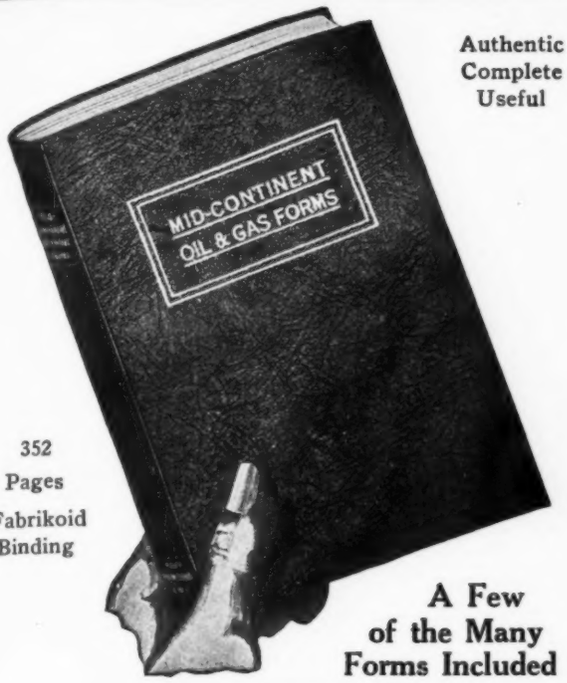
2. Roumania has 27 fields divided into four districts—Pravoha, Damovita, Bazua and de Bacua.

3. Garber field in Oklahoma, with 16 sands, is credited with first place.

4. A line near Titusville, built in 1863 but soon destroyed by teamsters, is credited with being the first pipe line.

5. Presumably from the Pliocene Fernando.

6. Enough times that you need not worry about it. The answer to the second question had an extra three zeros, and should have been $1,100,000. Said zeros were transposed from the other number.



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BROKERS—Contracts to Sell Oil Property; Exclusive Contract.
CONTRACTS TO BUY—Lease; Royalty; Produced Oil; Bottom Hole Money Contract; Dry Hole Money Contract.
ESCROW AGREEMENTS—To Examine Abstract; to Commence Well; Escrow Draft.
LEASES—Wild Cat; Standard Commercial; Mid-Continent Association; Rental Receipts; Extensions; Cancellation; Seismograph.
OPTIONS—Lease; Royalty; Notice of Acceptance; Sale and Assignment.
ASSIGNMENTS—Standard; Part Payment in Oil; Special Drilling Obligations; Oil Obligation; Working Interest.
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PRODUCTION FORMS—Agreements on Offsets; Application for Permit to Connect With Pipe Line; Lease of Storage Tanks; Oil Storage Contract; Crop Damage Release; Contract to Shoot; to Kill or Control Wild Well; Pick Up Station Lease; Division Orders; Transfer Orders; Pipe Line Ticket; Bond to Pipe Line on Cloudy Title; Sale of Casing Head, etc., etc.
TITLE CURATIVE FORMS—Affidavit Adverse Possession; Martial Status; Land Owner That Lease Rental is Paid; Quit Claim Deed; Waivers; Liens and Notes; Corrective Deed Clause.
WARRANTY DEEDS—Conveying Fee Simple; Retaining Vendor's Lien; Reservation of Oil Gas and Minerals, etc.
MORTGAGE FORMS—On Real Estate; on Oil and Gas Lease; on Royalty and Minerals; Trust Agreement; Cancellation.
LIENS—Notice of Materialman's or Mechanic's Lien Form, etc.
CHATTEL MORTGAGES—For Drilling Rigs, Tanks, etc.; Chattel Mortgage Note; Cancellation.
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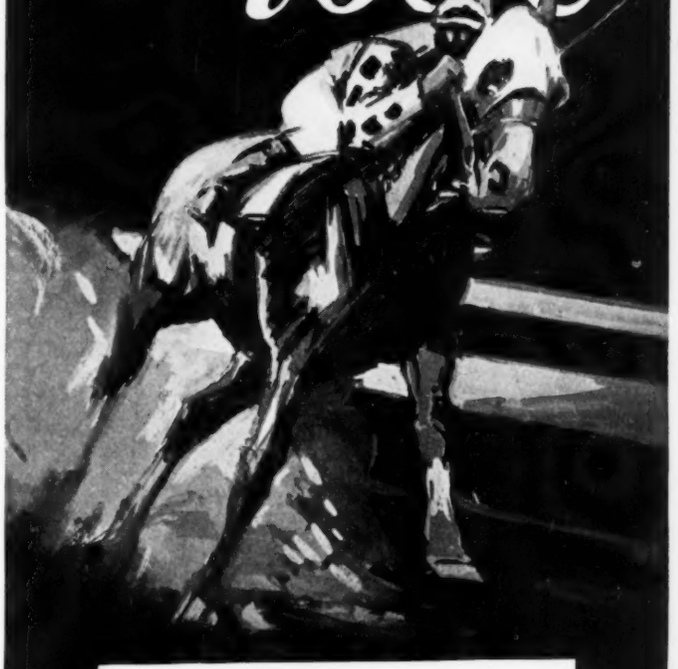

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